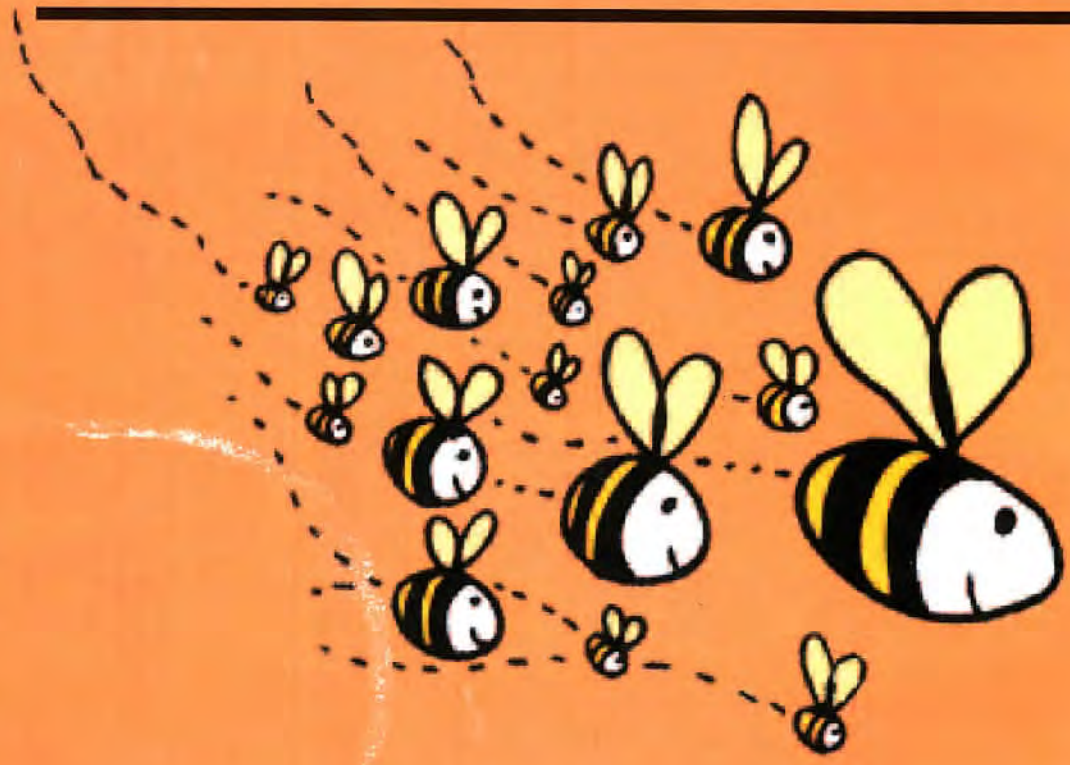
2008

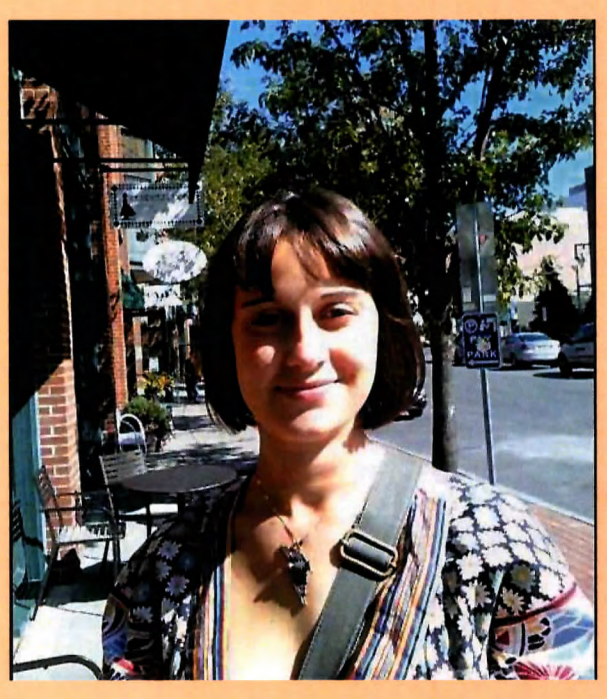
Outerdisciplinary

Tessa Franzese

OUTERDISCIPLINARY



Tessa Franzese, Fall 2008
Advisors: Kevin Lair, Brendan Moran
Thesis submitted towards completion of a Bachelors of Architecture degree



ABOUT THE AUTHOR

Since this research is interested in working at a personal scale, I think it is critical to acknowledge my own personal bias, as it strongly effects the content of the book. I am a college-aged woman raised and attending school in the New England area. I am an architecture student interested in community-based design, and I often prefer design solutions that operate on a smaller or more abstract scale than a building. I am interested in quilting based both on family and personal history, and my experiences with other disciplines have led me to believe that a wide variety of influences and input are necessary for design to be truly relevant to the general public.

ABOUT THE BOOK

The book is arranged by chapter corresponding to the development of key ideas. While the *concepts* evolved in a largely chronological fashion, it is important to realize that the *work* is not necessarily presented in chronological order, as almost all of the main ideas continued to circle back through and re-integrate themselves into the current concept.

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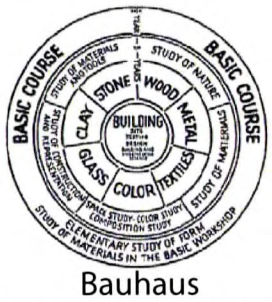
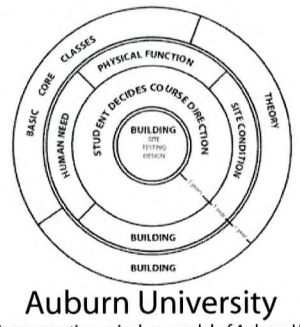


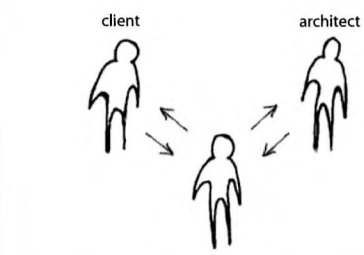
Bauhaus

above: diagrammatic curriculum model of the Bauhaus school at Weimar from 1919 to 1925.



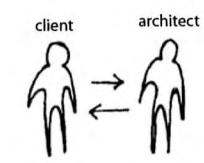
Auburn University

above: diagrammatic curriculum model of Auburn University's School of Architecture, including the Rural Studio.



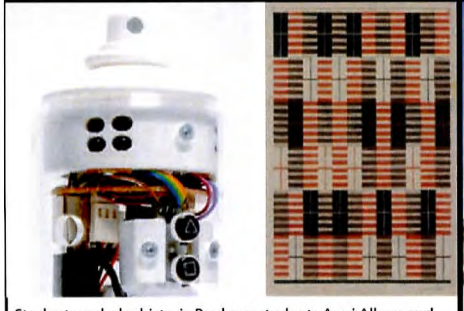
Architecture for Humanity

above: diagrammatic representation of how A4H acts as a connector for clients seeking architects and vice versa.



Design Corps

above: diagrammatic representation of how Design Corps works directly with a client.



Student works by historic Bauhaus students Anni Albers and Marianne Brandt as well as by modern Bauhaus University student Martin Lihs.

Rural Studio projects both under Samuel Mockbee and after his death include an Animal Shelter, the Yancey Chapel, and the Community Center. All are located in Hale Co., Alabama.

Above: One of the Model Home Projects in Biloxi, MS.
Below: Mobile health clinic for AIDS in Africa.

Above: Shed using reclaimed materials in Pearlington, MS.
Below: Migrant farmworker housing in Pennsylvania.

- Heavy interest in materiality and the close observation of their surroundings
- Influenced by the technology of mass production
- Strong grounding in the making of things
- Background in art, color theory, and composition

- Encourages students to determine the course of their own education
- Grounded in the art of construction and detail
- Insistence on the architect having a social responsibility to the community

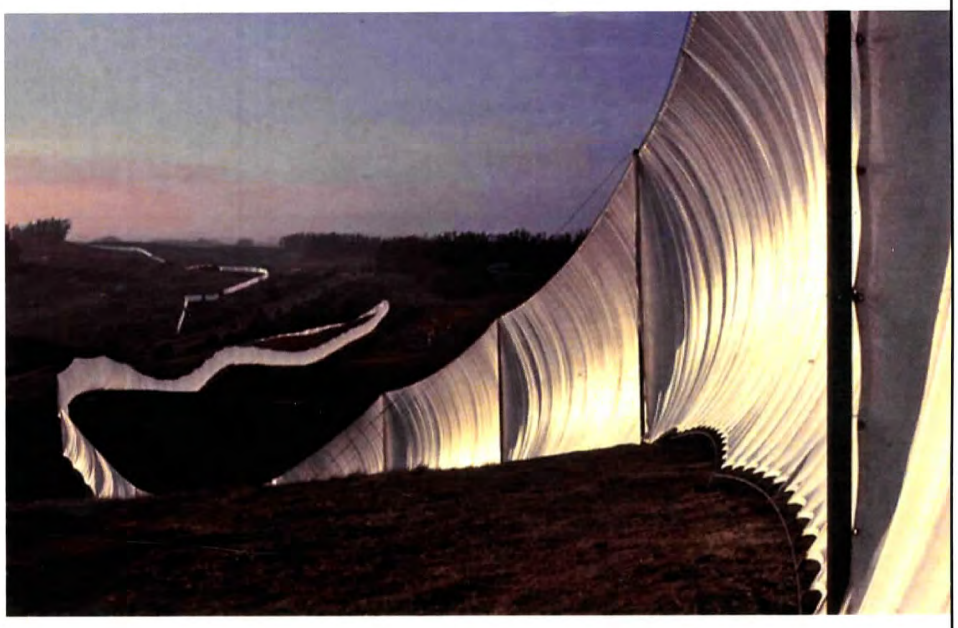
- Utilizes competitions to generate ideas for social issues.
- Includes both theoretically-based works and constructed projects.
- Increases awareness of social and political issues on a large scale.

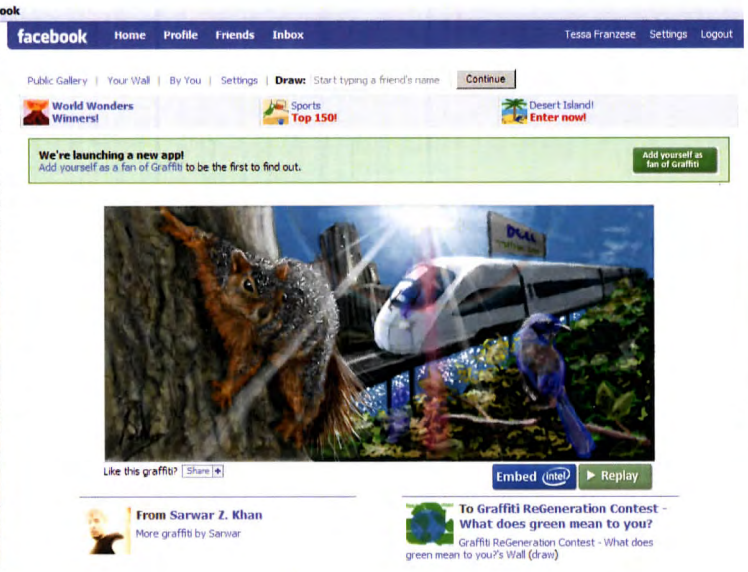
- Works directly with client, typically utilizing a group of students as a design team.
- Primarily deals with built works.
- Increases awareness on a small scale of the benefits of design for the general public.

EDUCATION

This thesis, which is concerned with the development of a methodology which allows for a more accessible architecture, began with the concept that blind spots in architectural education prevent architects from realizing design's social responsibility. So the first main idea was really about the underutilization of the potential of education. I understand education both in terms of architectural education and in a broader context as well, i.e. the education of the general public in settings outside of academia.

The boards above break down two educational models - the left comparing the Bauhuas ideology to Auburn University's Rural Studio. The Bauhaus model concentrates heavily on a close study of the student's surroundings as well as an intimate relationship with and knowledge of materiality. The Rural Studio is interested in an architectural education that is customizable depending on the student's interests, but generally focuses on the art and practical techniques of building. The second board compares two non-profit organizations which also function as educational models of sorts, Architecture for Humanity and Design Corps, which I have personal history and experience with. Architecture for Humanity generally acts as a connector between architects and clients, and often functions on a more global scale that involves both built projects and unbuilt schemes. Design Corps works directly with clients, often acting at a smaller and more local scale that almost always results in a built project.

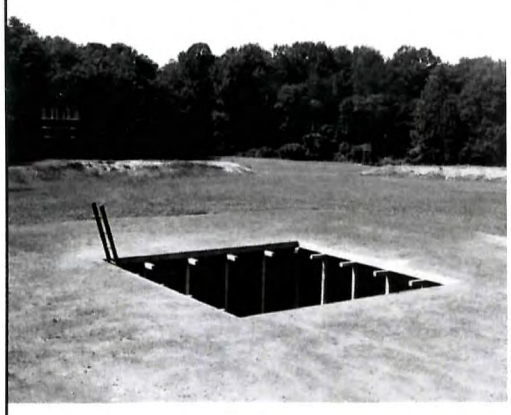


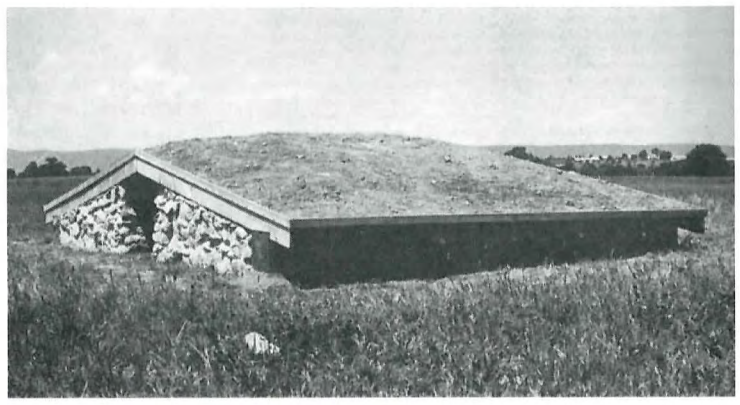


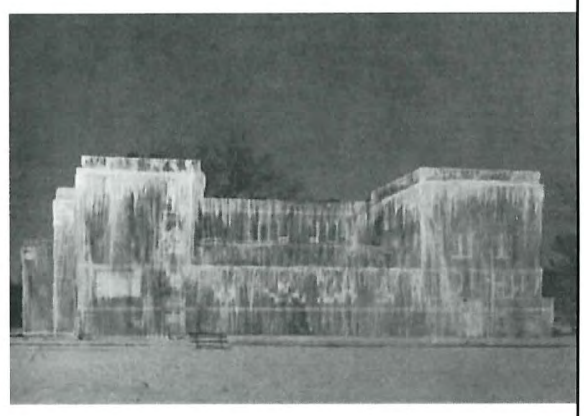
OUTSIDERS

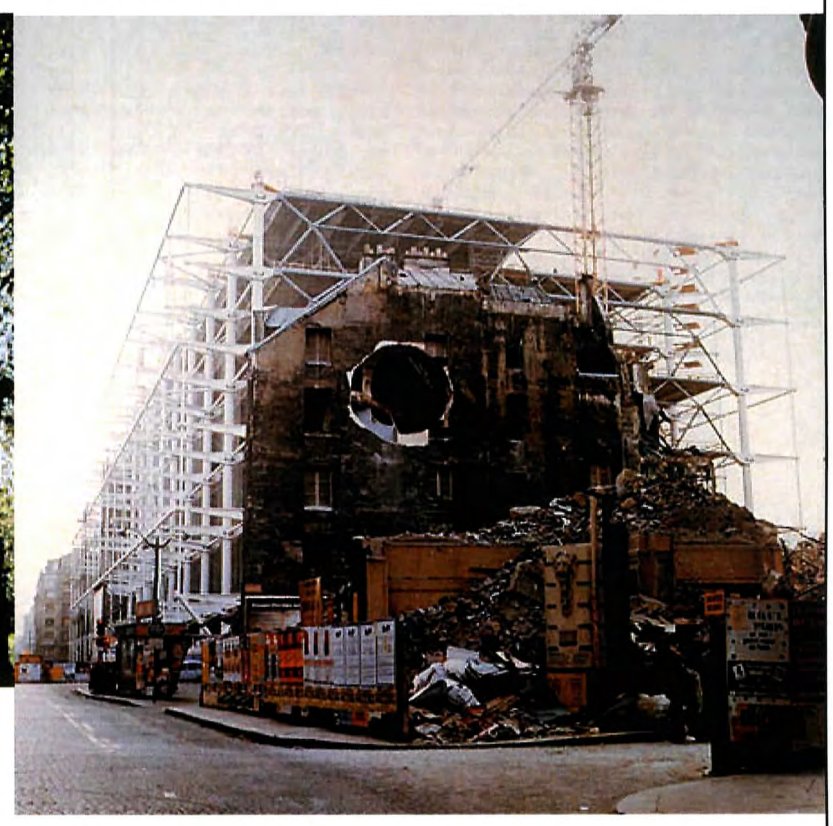
By acknowledging my own bias in the map of my education, I began to consider the nature of bias- inherent in the concept was the idea that something was biased *toward* a group of people or biased *against* a group of people. It implied that there were insiders and outsiders. Considering how insular architectural education tends to be led me to compare the architectural field to the art field, and the way that outsider art broadened the definitions of what art could be by accepting outsiders as insiders.

Outsider art, which Zolberg considers "art executed by patients in asylums, primitives, the homeless, children, and folk and ethnic artists" first became of interest to avant-garde artists of the 1920s. Many of the artists didn't even consider themselves as such, nor did they define their work as art. In the booming art market of the 1960s and 1980s, outsider art gained popularity with the general public until eventually the outsiders became insiders. Thus, outsider art arguably no longer exists. This absorption is partly due to the fact that artistic recognition no longer rests on a single identifiable institution such as the Academy but instead is distributed among "a plurality of gatekeepers." For instance, anyone can be a video artist on Youtube. Art is accessible to everyone; "anything can potentially be art." We can apply a similar logic to architecture. By tapping into other disciplines, and to architectural outsiders, we can discover alternative visions for the definition of architecture.









OUTSIDERS

There are a variety of artists that seek to deconstruct the perception and the physical reality of architecture, achieving in physical form what I hope to accomplish in abstract ideology and practice. The anarchitecture movement was interested in opening architecture up to a wider range of influences and in trying to find a new way to appropriate architecture as art. Thus, a lot of the work looked at physically manipulating buildings as a way to change the public's understanding of architecture. Similarly, I would like to open up architecture to the public eye - not in a literal opening of the building, but in terms of allowing a more direct feedback loop from the users of the space, the general public, to the architect and designers of the spaces.

On the top row, starting from the left is Mary Miss' *Perimeters, Pavilions, Decoys*, located in Roslyn, New York. The piece seeks to introduce architectural space in the form of voids and simple structures to the general public through baby steps, starting at a miniaturized scale and working towards an inhabitable scale. The middle photo is Alice Aycock's *Low Building with Dirt Roof*, located in New Kingston, Pennsylvania. Its scale prevents access, distorting the public's notion of what buildings are. Similarly, Gianni Pettena's *Ice House 2*, located in Minneapolis, Minnesota, consisted of a normal home which was covered completely in ice for about two months.

Shown on the bottom row are Gordon Matta-Clark's *Splitting*, located in New Jersey, and *Conical Intersect,* completed for the Paris Biennale of 1975. Matta-Clark, commonly discussed in architectural education for his site-specific projects known as "building cuts," which consisted of him cutting apart buildings slated for demolition in very precise manner, came from an architecture education and is interested in the "nonument," and its contribution to our understanding of space through void conditions.

outsider

insiders

OUTSIDERS

This research of outsider artists and the anarchitecture movement led me to define these crucial terms:

outsider: a person not belonging to a particular group, or unconnected with the matter in question.
a person or thing not within an enclosure, boundary, etc.

insider: a person belonging to a limited circle of persons who understand the actual facts in a situation or have private knowledge.
a person or thing not within an enclosure, boundary, etc.

characteristics of insider groups:
common knowledge, identity or experience base
interior discussion about issues concerning the group
specialized language and terminology
goals for the future of the group
inherent bias emerging from group norms

It is important to realize that the two groups are interdependent- there can be no outsiders if there are no insiders, and vice versa. Also, the roles are not permanent, and can change depending on your frame of reference or due to altered conditions. Above, two of the many processes that can emerge when an outsider exists. In the first case, the number of outsiders can multiply, forming two groups which both mutually can be described as insiders and outsiders. In the second case, an exchange of information and ideas - an educational process- converts the outsider to an insider.

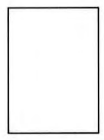
QUILT THEORY

The research into outsider art and the physical breaking down of architecture led me to quilts, which Zolberg considered "outsider art" under the category of folk art. Above, a picture of a quilt I produced as a way to analyze my time spent building a house for a Katrina survivor in Biloxi, Mississippi. I collected pieces of tile and glass found in the wreckage from hurricane Katrina and compiled them into an "archaeological" quilt. I chose quilting as a medium for analyzing experiences because of its ability to convey a narrative as well as its ability to present discontinuous information in a continuous way. Quilting is relevant not only due to its personal significance to me, but also because built into the practice of quilting is the tradition of bees- a way to introduce outsiders to quilting and quickly transform them into insiders. More importantly, quilting is and historically has been a widely practiced craft that is accessible and comprehensible to a large portion of the general public - it is universal.

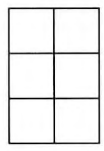
At first glance, architecture and textiles seem at odds with each other; one is grounded, fixed, and permanent, and the other is portable, flexible, and lightweight. Etymologically, Garcia illustrates that they share the same root: "textile, technology, text, texture, connection, and context are all derivative inflections of the same proto-Indo-European word tek, which is the root of architecture." They also share certain portions of their ideology, as Albers points out that both textiles and architecture "construct a whole from separate parts that retain their identity." What is perhaps most valuable about textiles are their ubiquitousness. Clothing has been utilized for tens of thousands of years, "and if we think of clothing as a secondary skin, we might enlarge on this thought and realize that the enclosure of walls in a way is a third covering, that our habitation is another 'habit'." In this way, both architecture and textiles can be seen as surfaces we utilize to protect ourselves. Both are comprised of discrete elements that come together to produce a (hopefully) harmonious whole, and both, at heart, seek to communicate on some level with the user.

Quilt Methodology

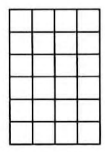
1. Identify a measurable area to work in.



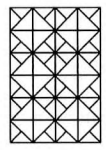
2. Divide the area into equal parts.



3. Divide the parts into smaller equal parts. Usually, the parts are divided into 4 or 9 equal parts.

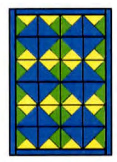


4. Following the prescribed grid, use orthagonal lines and diagonals to furthur divide the parts and to create a larger pattern across the whole working area.

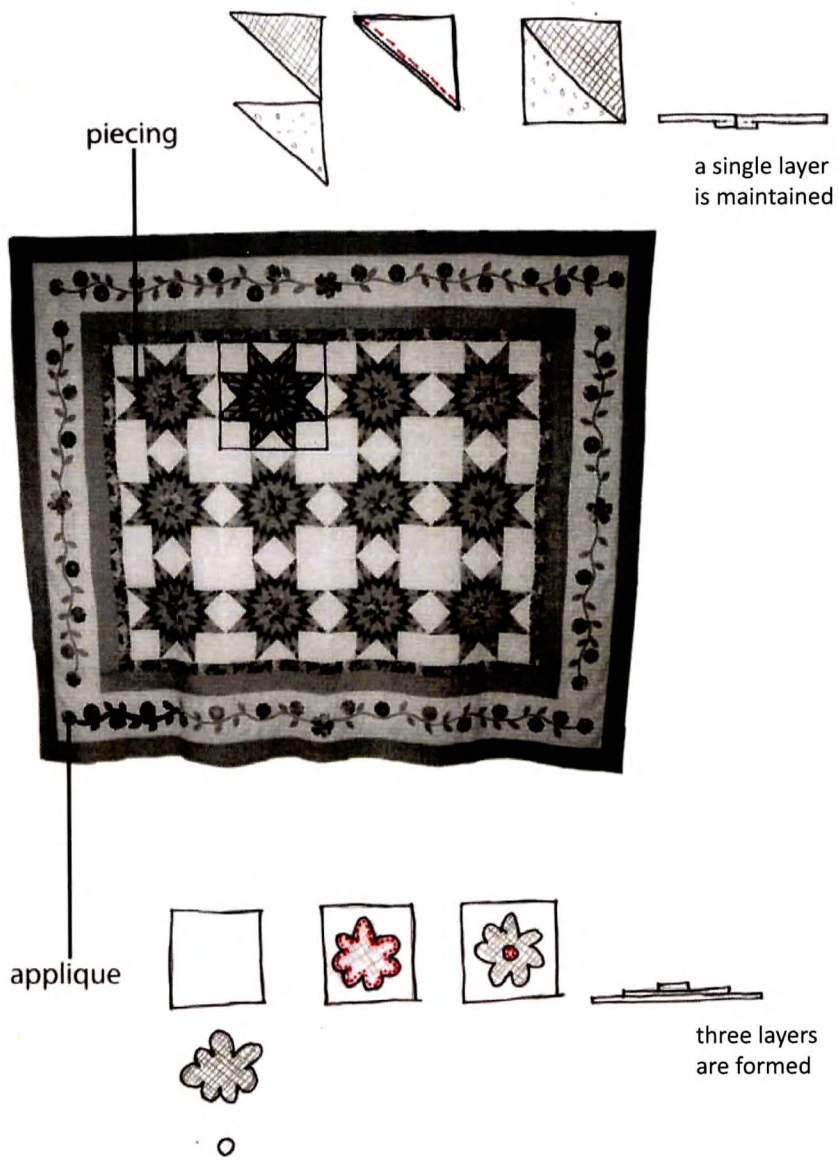


5. Use color and texture to establish a hierarchy within the pattern.

6. Once the blocks are assembled, use sashing and borders to connect them all together.



Quilting Techniques



QUILT THEORY

The process of making a quilt often, but not always, begins first with a specific pattern or idea for the whole quilt in the mind of the quilter. The size of the block is then determined, depending on how big the quilter wants the finished product to be. Then colors and prints are decided, which create hierarchy within the pattern, and allow for the same block pattern to produce a multitude of different-looking quilts. This effect is similar to the way knot theorists are often unable to tell if two knots are the same - sometimes it is hard to tell if two quilts are made from the same block pattern or not. After the blocks are constructed, sashing and borders, which are the strips between the blocks and around the edges of the finished top, may be added as the quilter desires. The diagram above left illustrates this process of completing a quilt. On the following pages, a taxonomy of the quilt universe illustrates the variety of finished products that fit under the umbrella of "quilt." Examples of each type of classification are found afterwards. Necessary to a piece being called a quilt is the existence of three layers- top, batting, and back; the sides being finished with binding or something similar; and the putting together of separate pieces into a cohesive whole. This putting together can be done two ways, shown above right. Piecing sews two pieces together with minimum spatial overlap, whereas applique layers and results in maximum spatial overlap.

To begin to set up a framework making architecture more accessible, I developed quilt theory, which is comprised of three parts, the social dimension, which speaks to the fact that quilting is often done among a group of diverse peers; an open framework, which allows quilters to produce a variety of different effects within the square-block structure; and convergence, in which quilters stitch together the three layers of the quilt, so that everything stays in place.

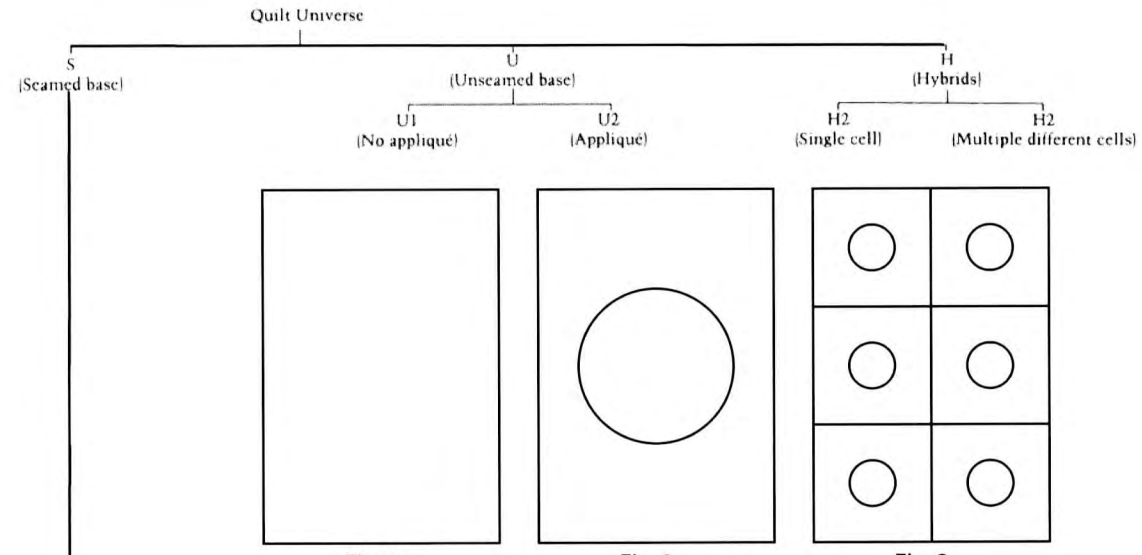


Fig. 1 Fig. 2 Fig. 3

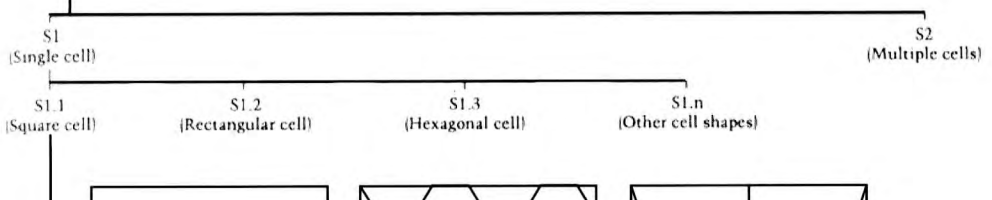


Fig. 4 Fig. 5 Fig. 5

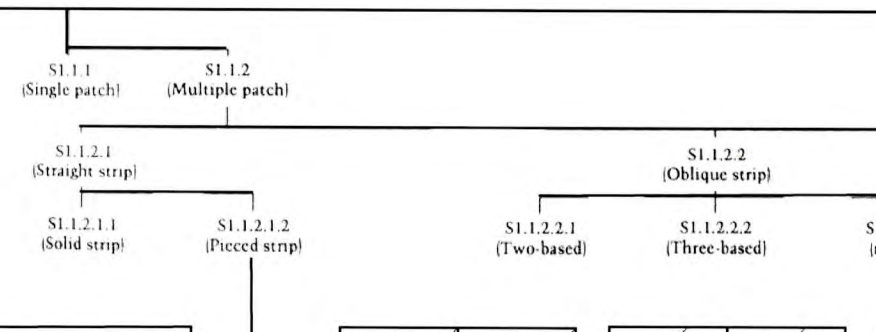


Fig. 10 Fig. 8 Fig.9 Fig. 7

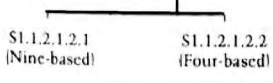


Fig. 11 Fig. 12

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

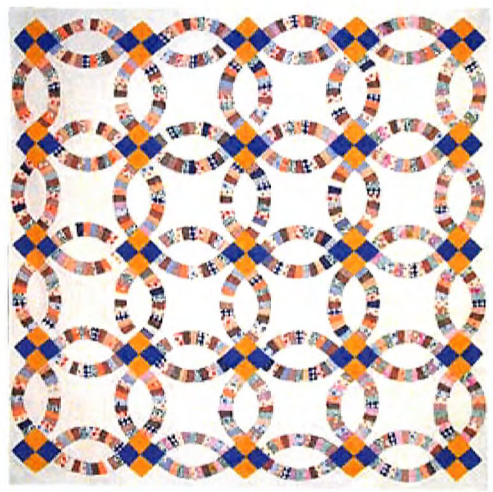


Fig. 6

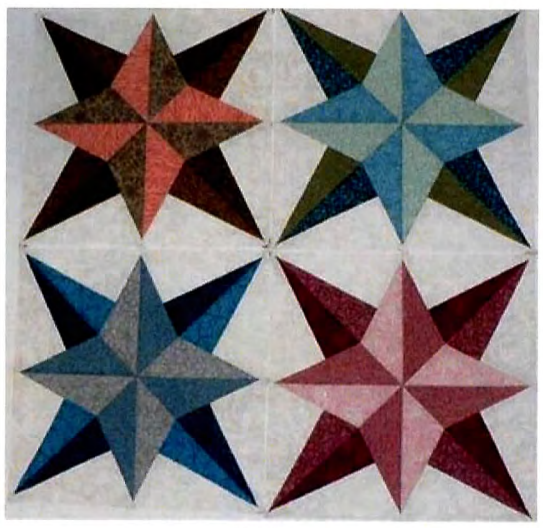


Fig. 7

Fig. 8

Fig.9

Fig. 10

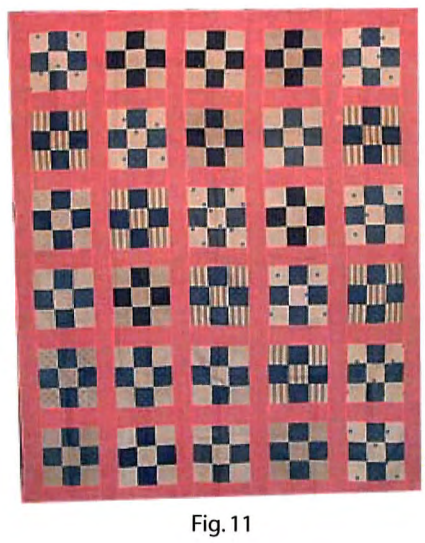


Fig. 11

Fig. 12

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QUILT THEORY

SOCIAL DIMENSION

You can look at the seemingly simple practice of quilting through several more analytic lenses. The first of these lenses is the social lens. From almost the start, quilting has been associated with social activity, with bees. Quilting bees are a gathering of friends, neighbors, and/or family to accomplish a set task. Often bees function as both social and utilitarian events. Historically, quilting bees in particular allowed women a rare opportunity to discuss topics generally regarded as taboo within the typical home environment.

Below, pictures from a quilting bee I personally took part in. Together with three other students (from different majors) we have sewn a quilt from a pattern over the course of the semester. Even though this activity takes place just once a week for an hour and a half, we have formed a community of sorts and have shared a surprising amount of personal information with each other, despite being relative strangers.

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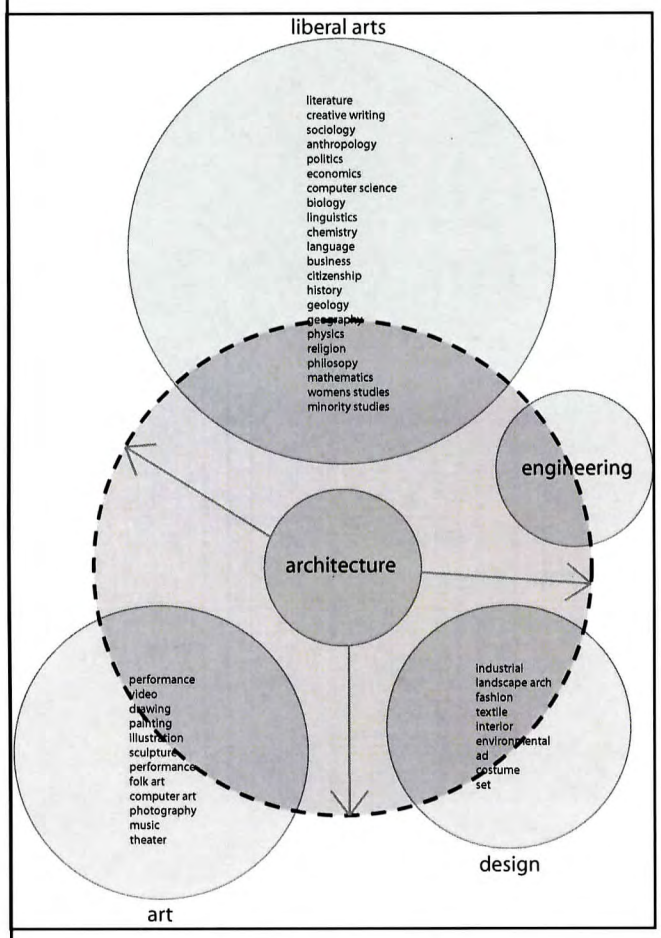

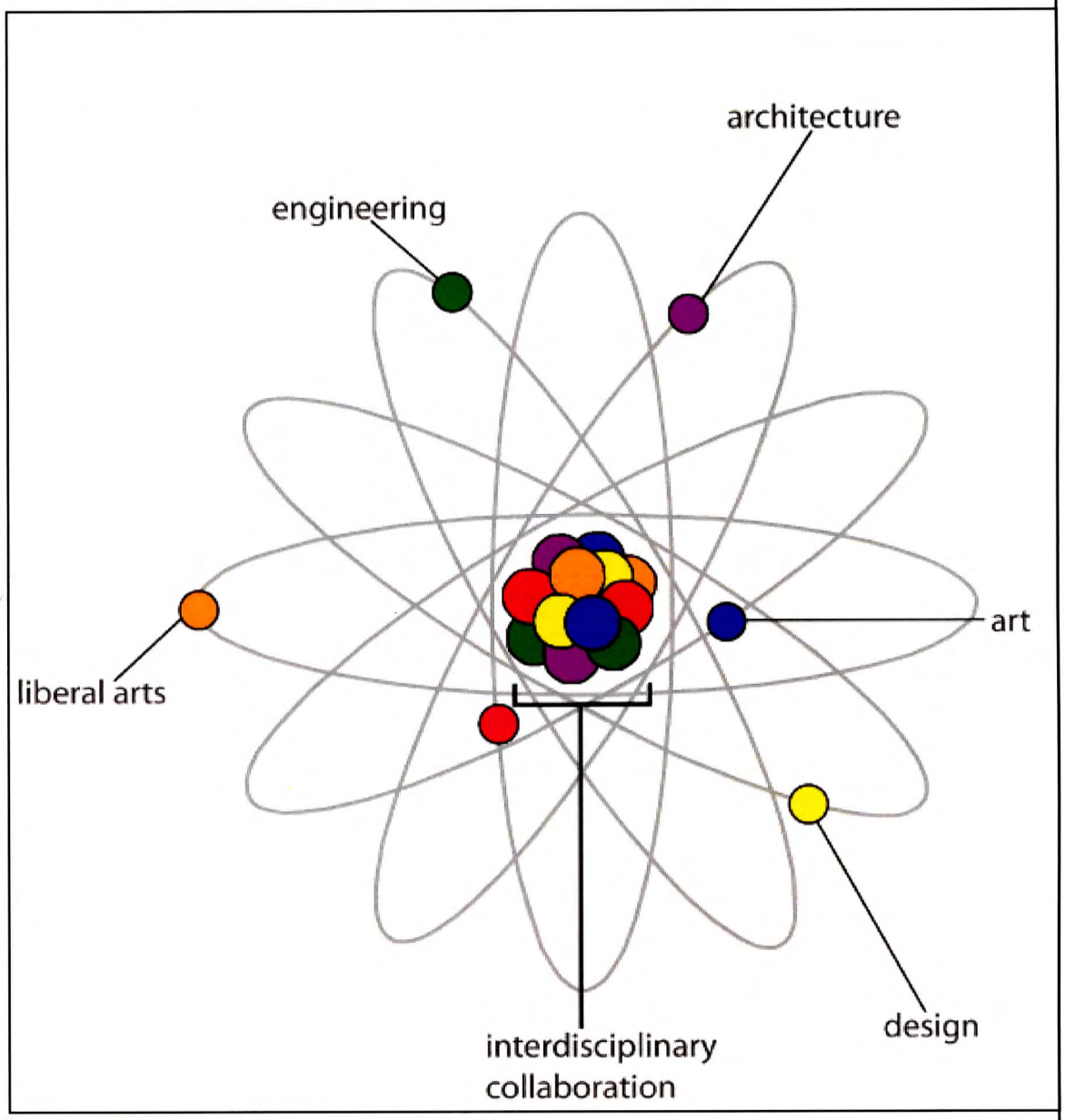

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QUILT THEORY

SOCIAL DIMENSION

When abstracted, the idea of a quilting bee is close to the concept of interdisciplinary collaboration. Similar to the way in which bees gather a variety of people together to accomplish a mission, collaboration brings together professionals and non-professionals from different fields. The interaction and discussion between the various disciplines allow for a variety of viewpoints and backgrounds to influence one another to accomplish a single set task. Often when we work in homogenous groups, we develop and perpetuate biases pertaining to our own particular field. Collaboration enables the group to work in completely unfamiliar way, creating a design that no one individual could have come up with alone. It also allows for the breakdown and acknowlegement of some of these biases; and, by witnessing other groups' biases, enables us to gain a deeper understanding of other disciplines.

Above, two diagrammatic models of interdisciplinary collaboration. The first is what most people think of when they consider collaborative practices- a Venn diagram sort of overlap between disciplines. In truth, collaboration is more confusing and less biased. Perhaps a better model would be the one on the right. Each field occupies their own space and has its own direction, and when collaboration occurs, it takes place in a different spatial location altogether.

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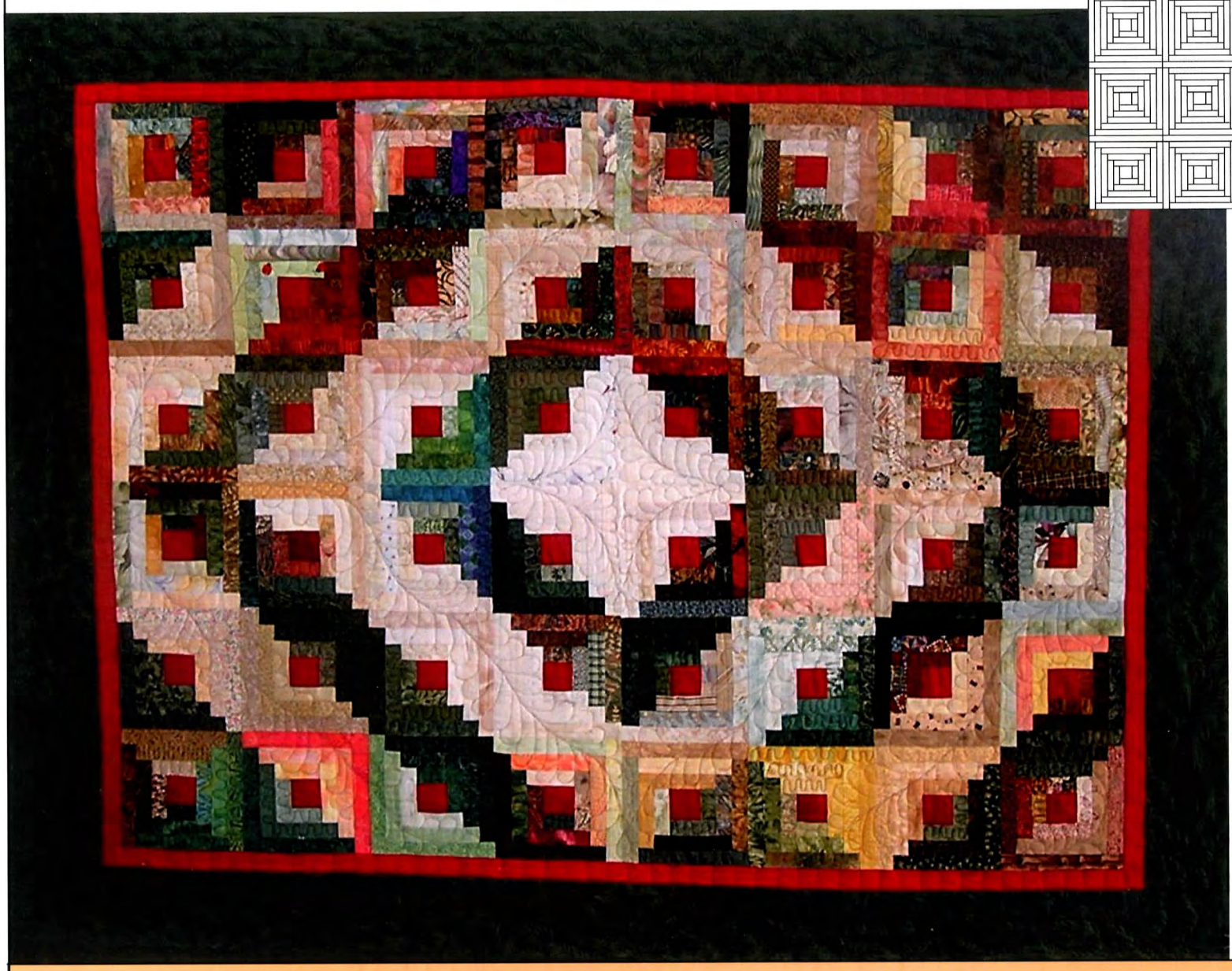
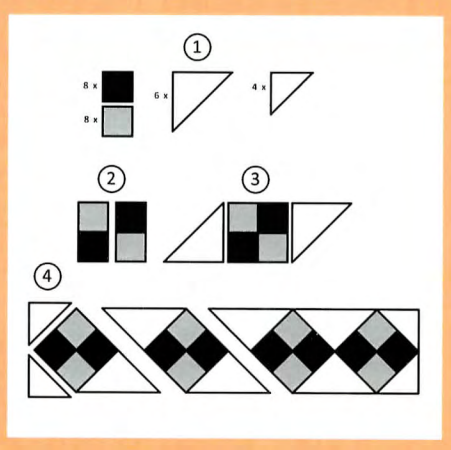


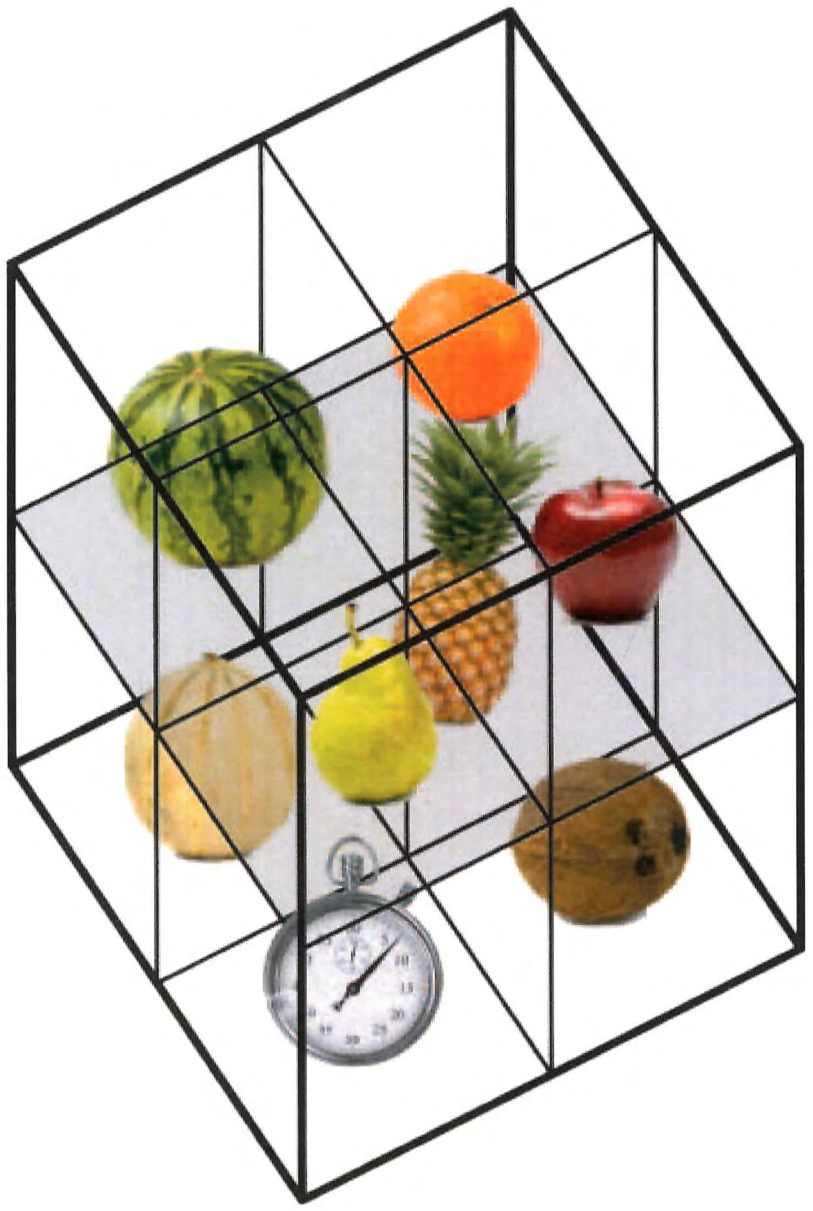
QUILT THEORY

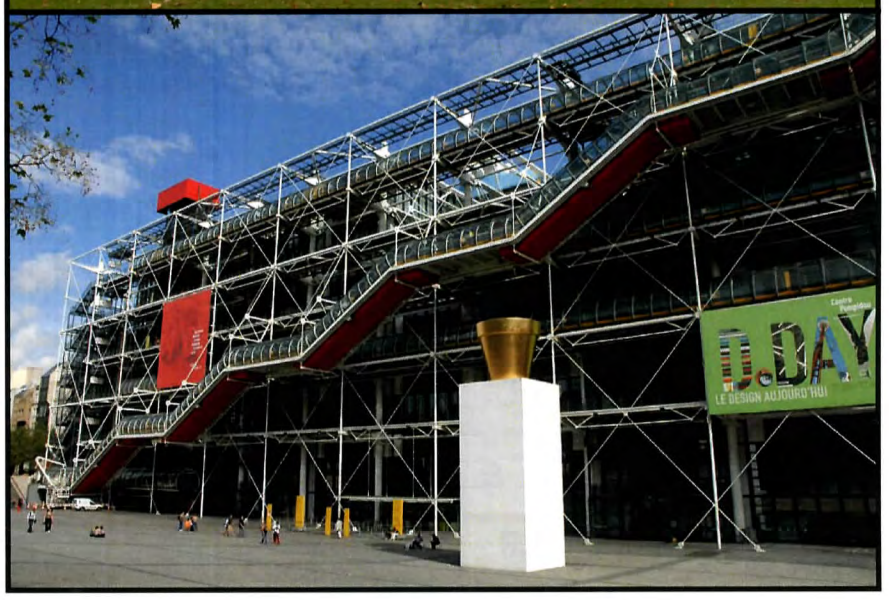
OPEN FRAMEWORK

The pattern of the quilt has a very high visual impact on the finished product. There is a whole industry based on books depicting the numerous quilt patterns that exist, both new and historic. Before these books existed, women would trace existing quilts to draw a pattern, or come up with their own either on paper or in their head. Usually, quilt patterns begin as a square block, which is then divided through orthogonal and diagonal lines to create a small pattern within the block. When arranged multiple times on a larger scale, these blocks create an even bigger pattern from a distance.

Below, the pattern of the quilt my group made. In the middle diagram, the number and types of pieces are shown. The blocks are made by sewing two sets of contrasting squares together, in this case pink and purple. Then those two rectangles are sewn together to create a four-patch square. Two triangles are added on either side of the square, which creates a long swatch of diagonal four-patch blocks. Sashing (the gold) is added between the four patch strips, as well as a series of borders. Quilts could be considered emergent systems- almost all have mistakes, as shown in the third image, which are dealt with as the maker sees fit.







QUILT THEORY

OPEN FRAMEWORK

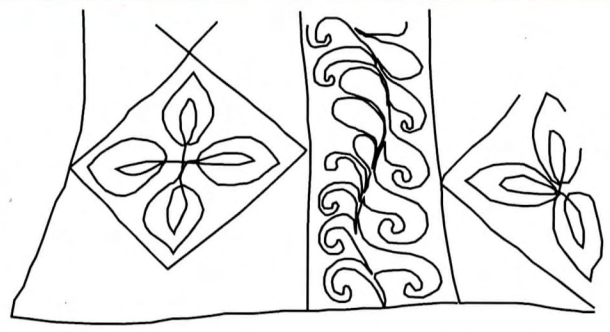
The way pattern functions in the quilt system can be abstracted and understood as an open system, both in the architectural and computational sense. In the architectural sense, quilting pattern is an open system because it is a conceptual framework for which anything, or almost anything, can be inserted and still seem like a part of the system. This is true even for mistakes, as seen on the previous page. Similar to computer systems, quilting pattern is an open system based on its ability to receive input and produce output in relation to its environment. This means that quilting takes information, inspiration, and materials from society, bring them into the "quilting universe" and, continuing to take cues from the exterior world, produce a quilt which in turn informs and inspires society.

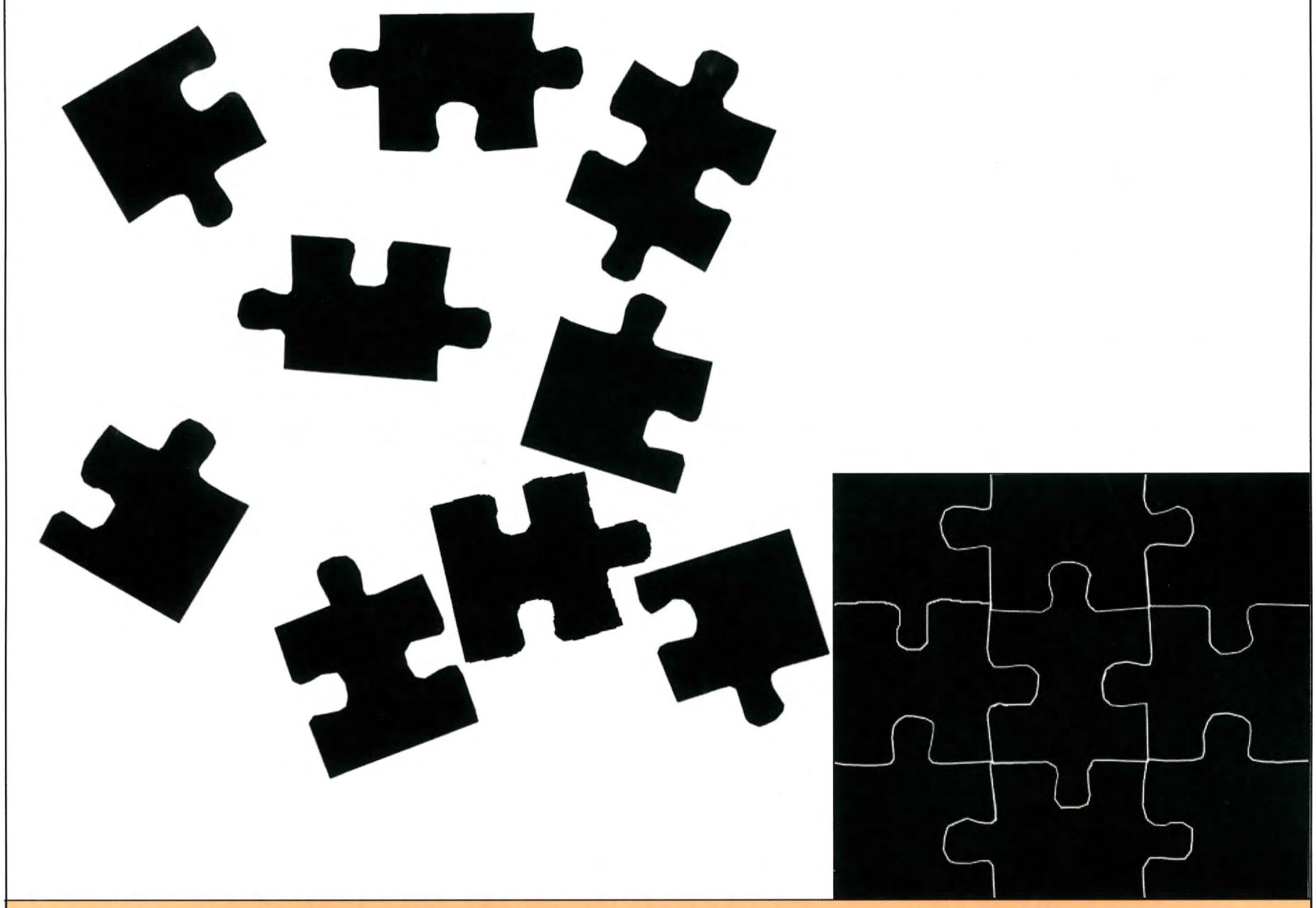
Above left, a simple diagram showing the versatility of the open framework - it allows users to put their own bias on the space, and concentrates on being adaptable and universal. Examples of this type of architectural system include Le Corbusier's Heidi Weber Pavilion, built in Zurich in 1965. The expressive umbrella contrasts with the modular cubes, which were conceptualized as reconfigurable spaces that could be changed according to the user's needs. Similarly, Renzo Piano and Richard Roger's Centre Pompidou, built in Paris in 1977. This art museum is a 7-story superstructure with all of its mechanical ductwork and spaces on the exterior of the building, allowing for huge amounts of free plan space for the museum curators to arrange at will with temporary walls.

QUILT THEORY

CONVERGENCE

'Quilting' is actually the last step in the process of making a quilt. It is the practice of sewing together the three or more layers that make up a quilt- the pieced together quilt top; batting or fill, usually cotton or an older quilt or blanket; and backing, which is generally one big piece of generally coordinating fabric- so that they each stay in place. It is also a last chance to emphasize certain elements of the design. Quilting can be done by hand or by machine. Traditionally, the quilting step is what women generally did at the end of the day after dinner, because it is a quiet activity that doesn't require much attention, and can be completed while listening to the radio or having a conversation with others. Quilting is also the step that is generally performed at the quilting bees. There are many different approaches to quilting, but generally the stitches are floral-based/ organic, or else they echo the lines of the quilt block or fabric pattern. Below, the straight lines all describe the echoing approach, whereas the flowers and vine quilting reflects the more organic approach.



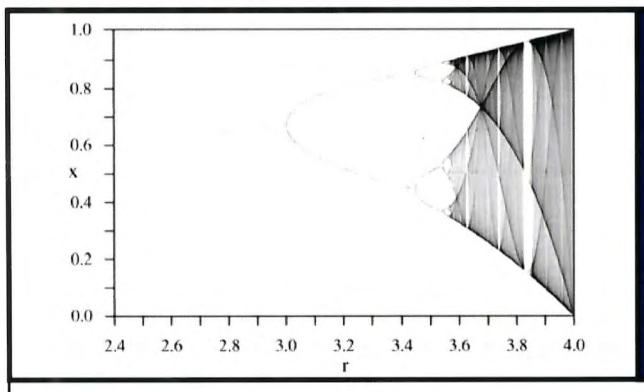


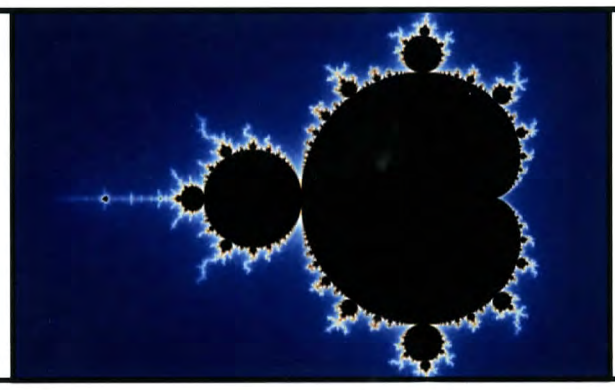
QUILT THEORY

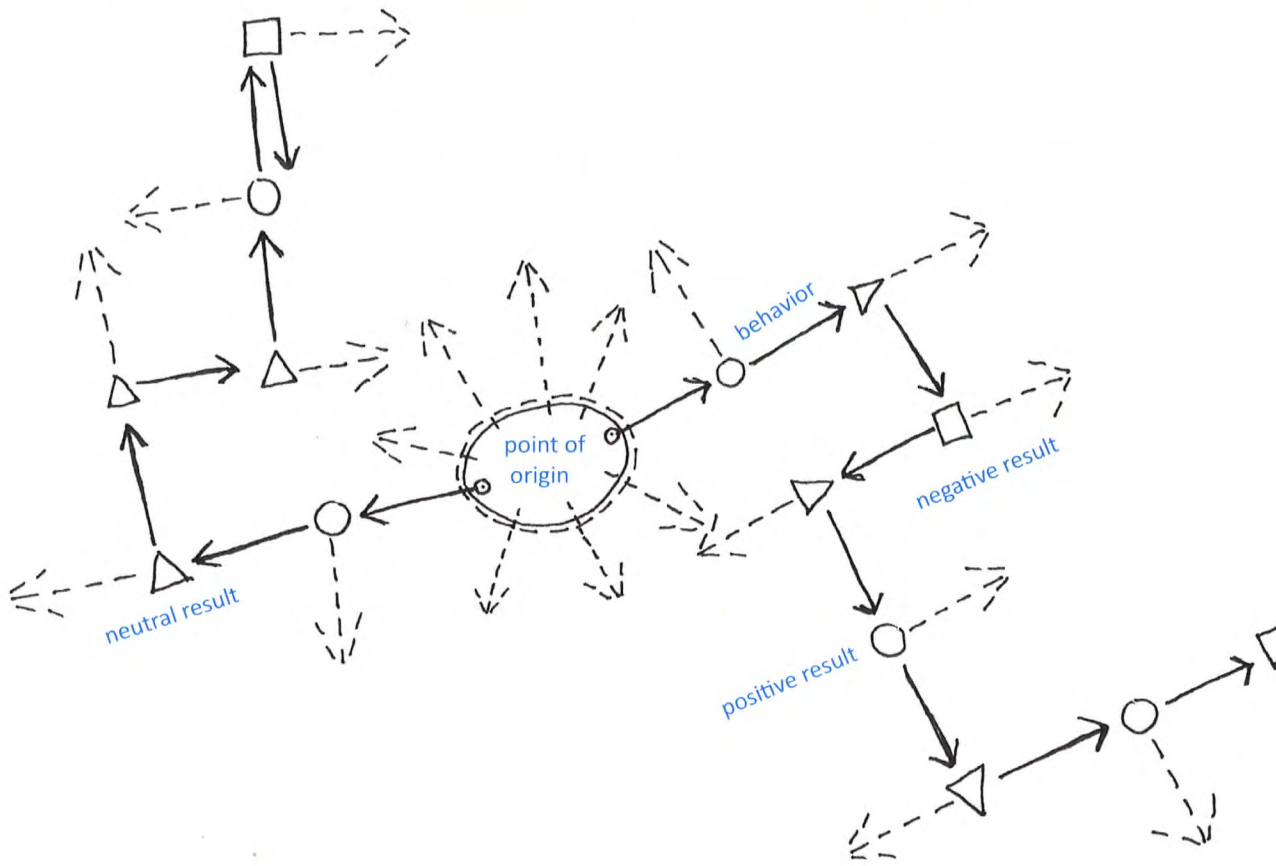
CONVERGENCE

The act of literally stitching three layers together can yet again be abstracted, this time into the combination of ideas. Like the practice of interdisciplinary collaboration, the merging of concepts and systems serve to make proposals richer and more accessible to a greater portion of the general public. It is the act of holistic thinking- considering not just what is immediately in front of you, but how your actions will affect each of the larger systems you are operating within. Through consciously trying to impact related systems in a positive way, you create a continuous, self-conscious process of analysis and synthesis by constantly taking apart the individual elements, looking at them critically, and then reintegrating them all back together. In this way, outsider concepts begin to be integrated into your thinking, breaking down the boundaries between "insiders" and "outsiders." Above, a diagram illustrates how thinking in this way is sort of like a puzzle that is perpetually looking at its pieces and putting them together in new ways until an appropriate solution emerges.

By abstracting the practice of quilting into a theory and breaking it down into three separate aspects, I am able to gain insight into some of the characteristics that will enable architecture to make itself more accessible, thereby gaining some of the benefits that quilting provides to quilters.







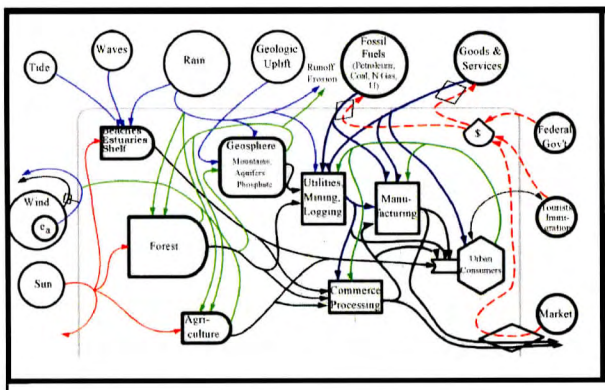
OTHER THEORIES

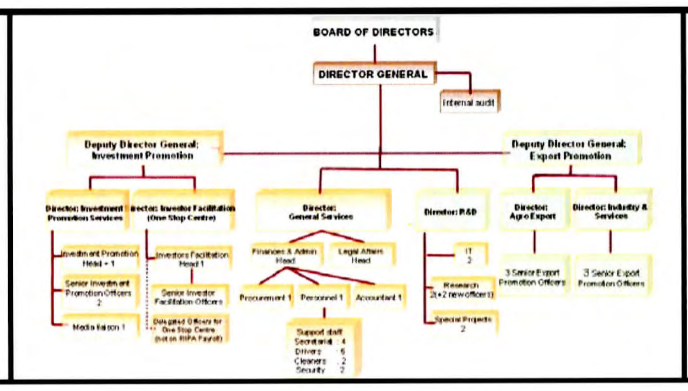
CHAOS THEORY

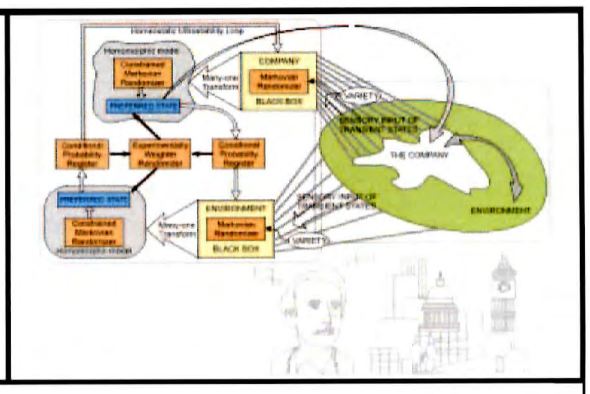
Chaos theory relies heavily on the idea of the butterfly effect- that a single starting points may end up as a plethora of different outcomes depending on decisions made, which in turn set off a chain reaction of different possible decisions and outcomes

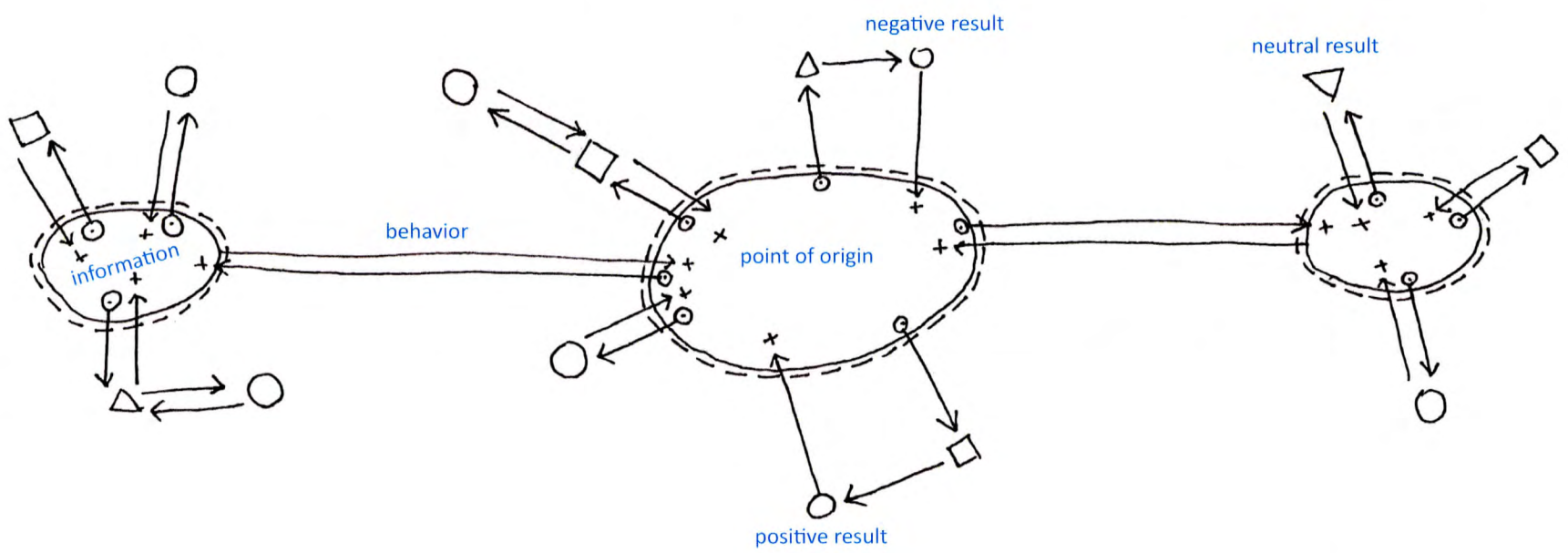
> *"The flapping of a single butterfly's wing today produces a tiny change in the state of the atmosphere. Over a period of time, what the atmosphere actually does diverges from what it would have done. So, in a month's time, a tornado that would have devastated the Indonesian coast doesn't happen. Or maybe one that wasn't going to happen, does" (Stewart).*

This phenomenon, also known as sensitive dependence on initial conditions, helps to illustrate the basic principles of chaos theory. Mathematical equations of varying degrees of complexity have been developed to describe the patterns of chaotic behavior- such as the flipping of a coin, a human heartbeat, and the weather. This led to the theory that perhaps in DNA or other applications, exact location is not predetermined, but rather a formula is encoded which outputs a seemingly random pattern of results. While precise predictions of the outcomes of such categories are not entirely possible, experts have noticed a pattern in the pattern- that once the possible outcomes are tracked according to their input, chaos is reduced to order once again. Often, patterns are self-referential in scale; for example, Benoit Mandelbrot studied the price fluctuation of cotton over a sixty year period, and found that the curves for daily price changes exactly matched the curves for monthly price change. The term 'fractal' was invented by mathematicians to describe this attribute of self-similarity. Fractal structures have been noticed or applied to many other disciplines and real-world situations, including the observation of the human body and of the composition of plants, the ocean's currents, and the creation of music. Inset above is the bifurcation diagram, which shows chaotic behavior past a certain threshold, and two images of how fractals are self-referential in scale. The diagram shows how a multitude of different choices are possible at every point.





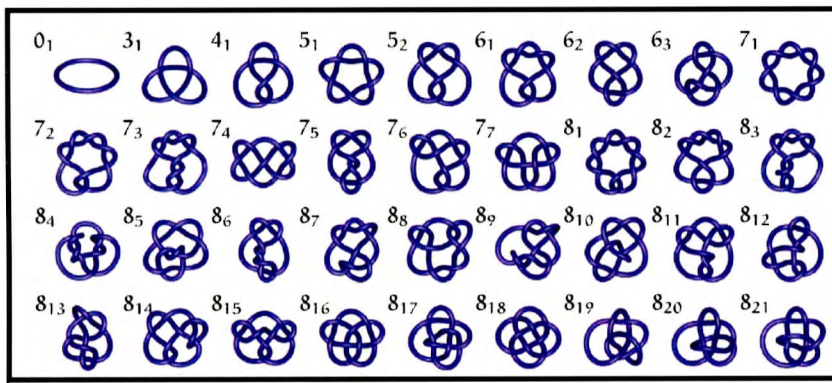


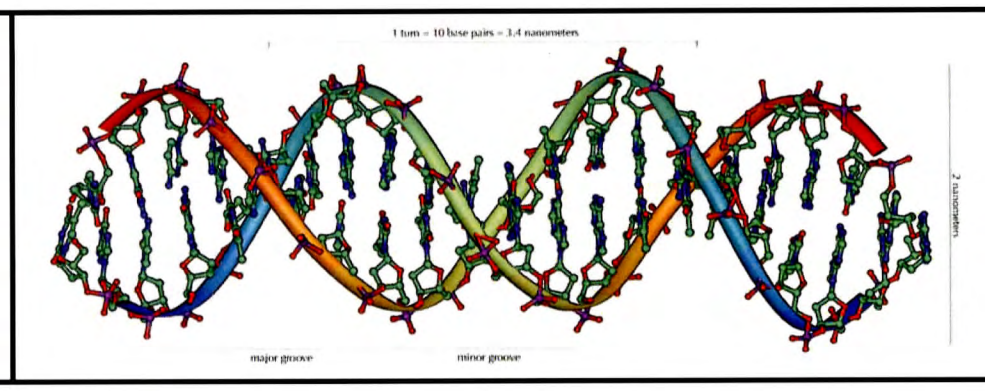


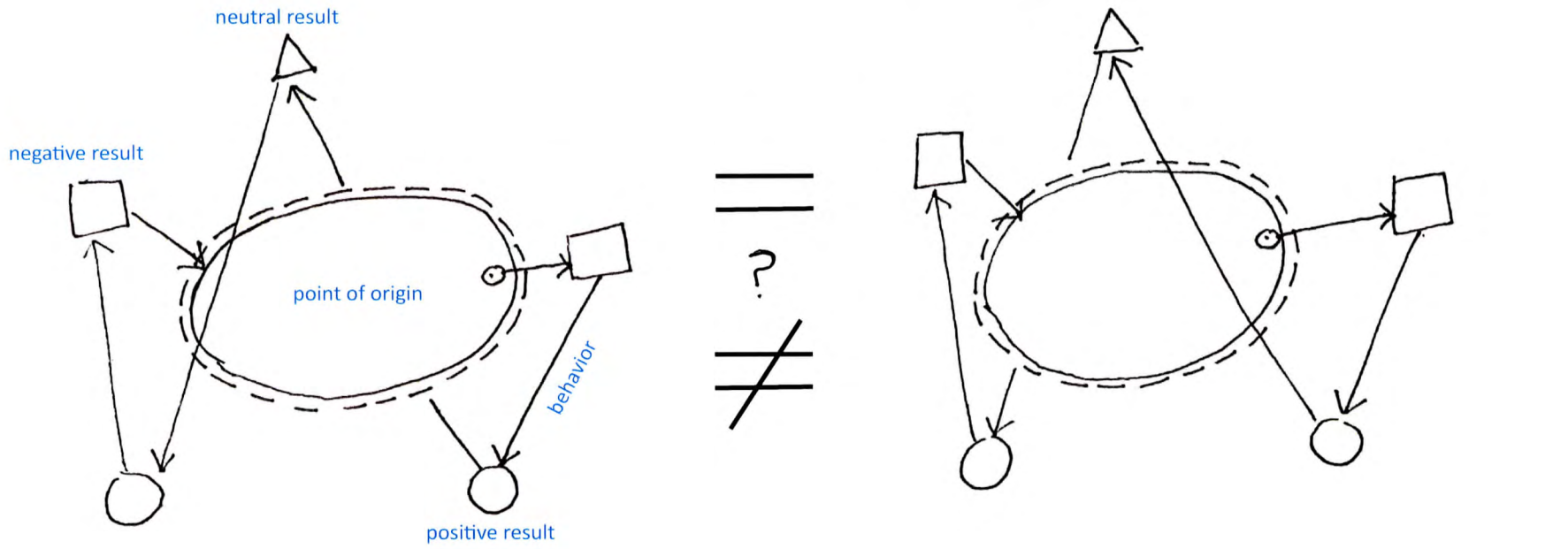
OTHER THEORIES

SYSTEMS THEORY

Systems theory studies the nature of complex systems in nature, society, and science. It is not so much a single theory, but rather a method of approaching intricate structures. By abstracting the system and concentrating instead on its individual components and how they contribute to the functioning whole, scientists have established a framework that they can use to analyze, describe and compare systems to each other. Systems cannot be broken down into individual components, and those components analyzed. Nor can you conceptualize these discreet components being added together in a linear fashion to describe a complete system. Instead, systems are characterized by the interactions between components and the potential for non-linearity in the functioning of these interactions. According to Kuhn, the one thing common to all systems is the conveyance of information units, which are defined as the proportional amount of uncertainty that is decreased by their transmittal. Systems can either be controlled, often called "cybernetic," or uncontrolled. They can also be closed, where interactions occur only among the preexisting system components, or open, where the outside environment can have an effect on the system. Inset above, two diagrams show decentralized and centralized systems, as well as a cybernetic system, which are controlled, non-hierarchical systems with continuous feedback loops. Below, diagram illustrating how sometimes multiple smaller systems make up a larger system, and how feedback information is crucial to the efficiency of a system.





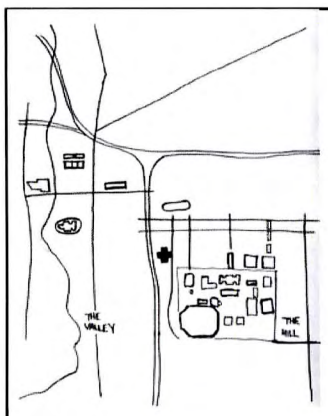


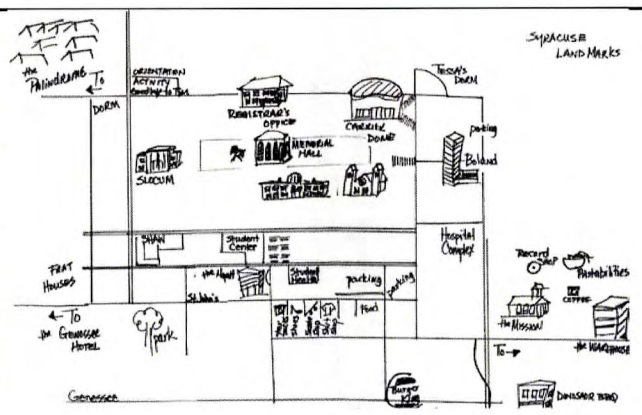
OTHER THEORIES

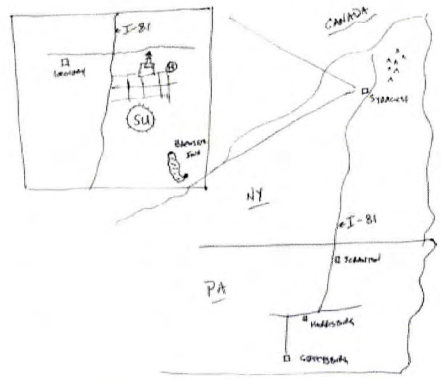
KNOT THEORY

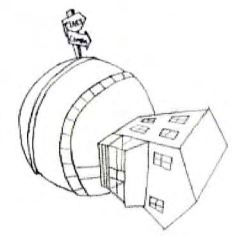
Knot theory attempts to provide a mathematical equation for both the tying and untying of knots. Everyday knots, like those on your shoes, serve as inspiration for the field, but mathematical knots differ in that the ends of the knot are joined, creating a continuous loop so that the knot cannot come untied. Essentially, this type of knot is a circle conceived in three-dimensional space. So, you could say that knot theory is a kind of three-dimensional systems theory. It is a subset of topology, a branch of mathematics that studies the properties of deformed space. Topology is similar to geometry and close to geography, but is less interested in the numerical distance between points than it is concerned with the assembly of distorted space. One of the biggest concerns with knot theory is being able to recognize two knots of the same classification. To this end, a two dimensional diagramming method has been developed to simplify the process, with particular attention paid to which string is passing over and which string is underneath. Knot the has been applied to similarities in the molecules of DNA as well as to parallels in quantum theory as part of a larger mentality that believes it possible that "whole chunks of mathematical physics are just shadows of a much larger structure of general mathematic theory." Inset pictures, above, show some of the simple knot formations compared with the similarities seen in DNA. Below, the diagram illustrates the difficulties in distinguishing identical knots.

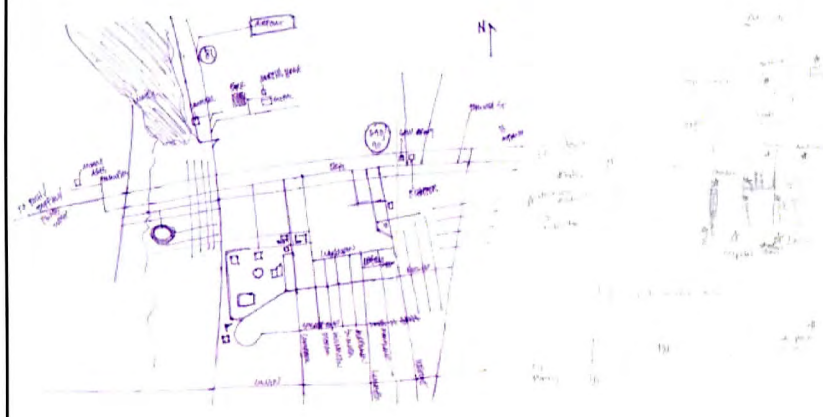
Through looking at a sampling of mathematical and social theories, I am making a case for the applicability of applying an outsider concept like quilt theory to architecture. In addition, these various theories have added richness (in keeping with the convergence aspect of quilt theory) to my understanding of how emergent theories can contribute to the development of a new, more accessible architectural methodology.

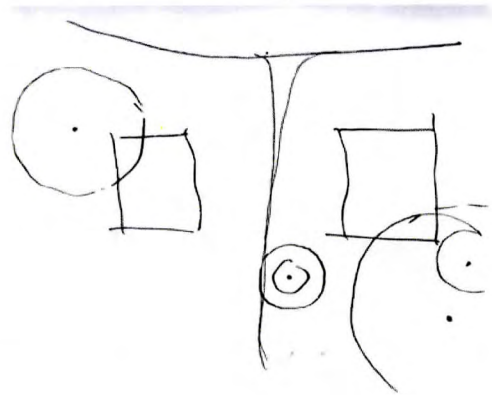


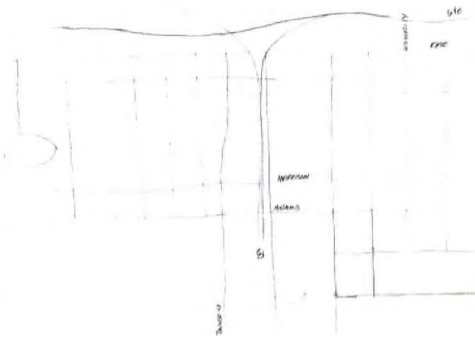


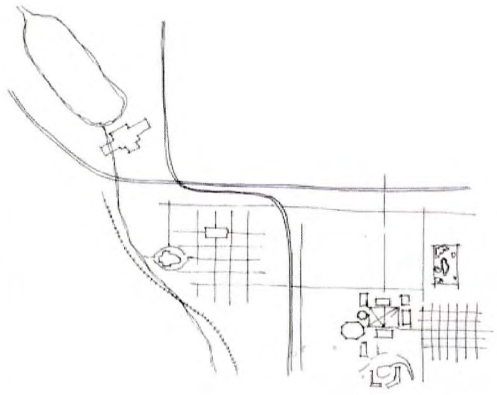


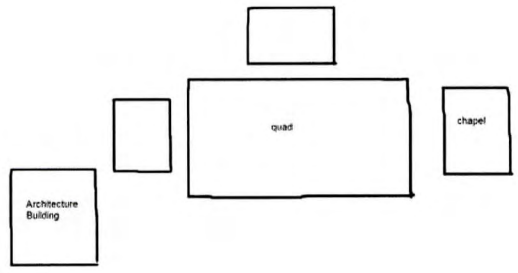


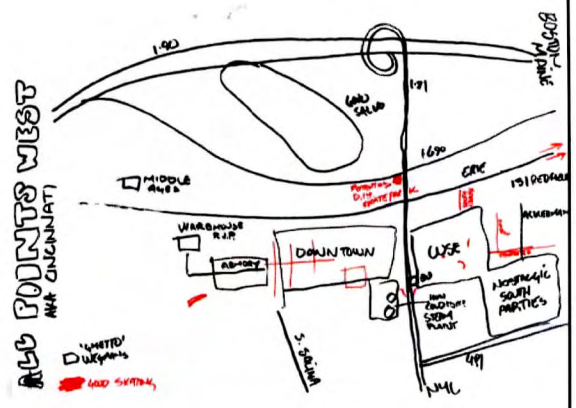












RESEARCH

MAPS FROM MEMORY

Equipped with a set of theoretical tools to aid me in my search for a new architectural methodology, I began to experiment hands on with different research methods to test some of the concepts that have been running throughout the thesis.

These next four research sections illustrate a series of activities undergone to find biased readings of the city of Syracuse. Maps from Memory is a series of maps obtained from students at Syracuse University and from people who have been to Syracuse once or twice. The goal was to find themes throughout the maps completed by insiders as well as possible themes in the maps drawn by outsiders. I noticed that the people mostly unfamiliar with Syracuse were aware of mostly the campus and less so of the rest of the city, of 81 and downtown. They relied heavily on personal experiences and memories as spatial indicators, and, as expected, often mixed up where things were. Insider students generally drew the city at a larger scale, including more area such as downtown, Erie Boulevard, and even Onondaga Lake. The students were less likely to populate their map with personal experience, and instead completed on fairly accurate renderings of actual spatial conditions found in Syracuse, New York. Students also, surprisingly, spent less time on detailing the campus, as opposed to outsiders, who were most comfortable drawing the campus and less comfortable drawing any other part of the city.

RESEARCH

LOST AND FOUND

I next turned my eye toward campus and looked at Euclid Ave, a well populated and compelling connector between the most prominent area of student housing and campus. I accepted my own bias and looked at what college-aged women were willing to lose on this connector- the disposable identity that is left on the sidewalk on the way to campus, from the bars or frats, to the park or to Westcott Street, or on the way home from another student's house. I used my cell phone to take pictures of these parts of themselves that women were willing to lose: barrettes, lipgloss, purses, shirts, socks, sunglasses, etc., and mapped them based on location and date collected on the map above. For some of the items, I constructed false narratives for how the objects came to be left on Euclid as a way to trace these items back to their "original" owner. The following pages chronicle the cell phone pictures I took, and maps showing the spatial relationship between Euclid Ave and the places these women are coming from/ going to. In this way, I begin with the object, connect it to an imaginary person, and then connect that into a larger spatial framework of the commuter patterns centered around Euclid Ave.

1 panties 9/7/08 2 flip flop 9/7/08 3 name tag 9/12/08 4 barrette 9/12/08 5 barrette 9/12/08 6 hair tie 9/12/08 7 sunglasses 9/12/08

8 starbucks 9/13/08 9 earring 9/13/08 10 lip gloss 9/14/08 11 tank top 9/14/08 12 sweater 9/15/08 13 tank top 9/16/08 14 sock 9/17/08 15 lighter 9/20/08

16 chocolate wrapper 9/20/08 17 condoms 9/20/08 18 lip gloss 9/20/08 19 lip gloss 9/21/08 20 cell phone case 9/21/08 21 half a bra 9/28/08 22 half a bra 9/28/08

23 purse 10/5/08 24 earring 10/6/08 25 tank top 10/7/08 26 nametag 10/17/08 27 t-shirt 10/25/08 28 umbrella 10/25/08 29 earring 10/25/08

30 socks 11/1/08 31 scarf 11/3/08

RESEARCH

Maps showing the relationship between Euclid Ave and bars, campus, itself, frat houses, Westcott Street, and surrounding parks.

(10) lip gloss 9/14/08

_____ meant to put it back in her purse, but it was such a tiny purse, and she was kind of drunk, so she missed, and it fell to the ground instead. Packing another purse a couple nights later, she realized her lip-gloss was missing, but, unable to recall where it might have gone, there was little she could do about it.

(24) earring 10/6/08

_____ realized she was missing the other one that night. She always took off her earrings after she had brushed her teeth but before she changed for bed. She wasn't upset. She threw its twin in the trash, and only felt a momentary pang of regret.

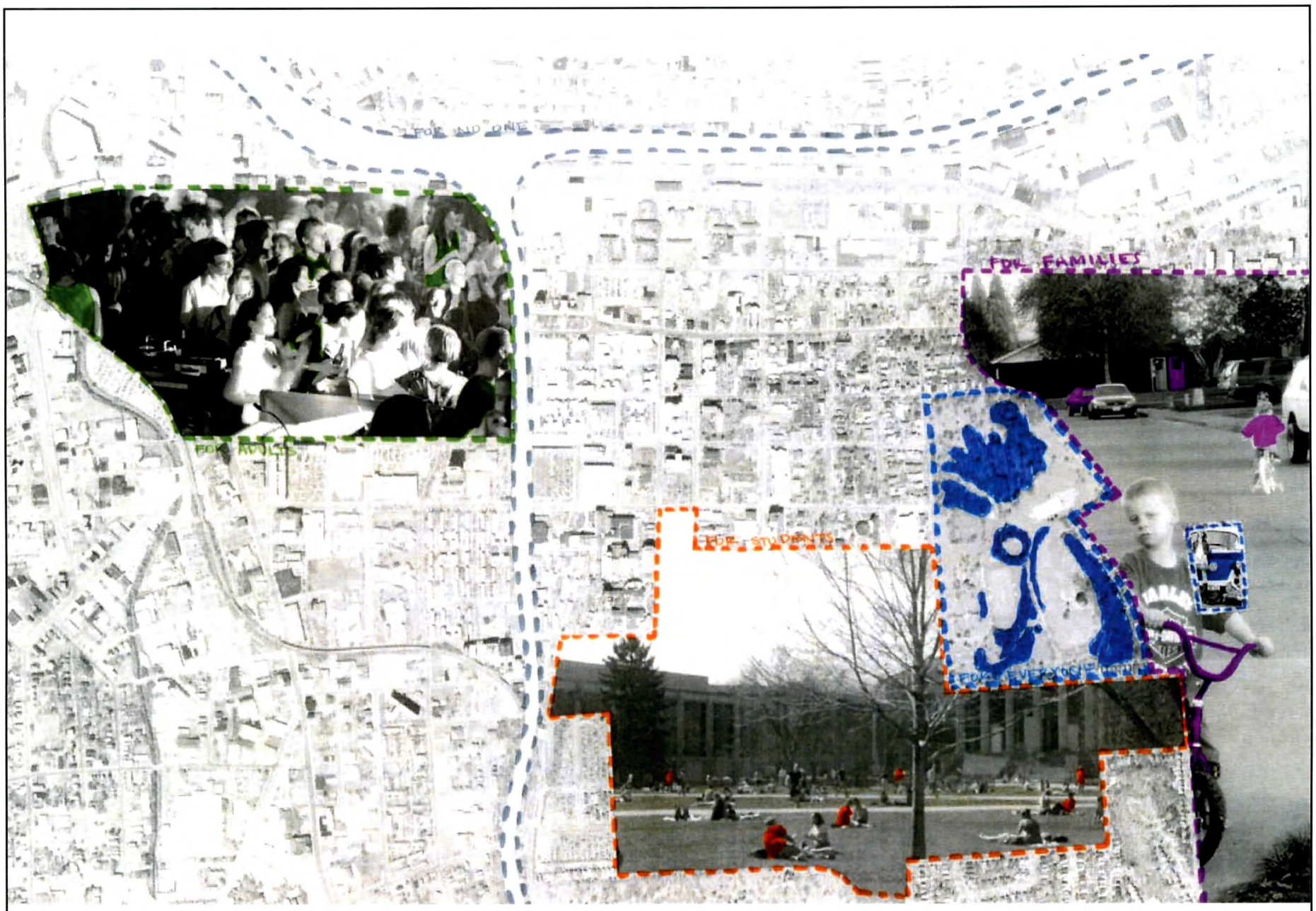
RESEARCH

(15) lighter 9/20/08

_____ was having a quick smoke on the way to work when her lighter ran out of fluid. She tossed it, figuring she could pick up another at the convenience store on her smoke break. She thought for like the millionth time about how she should quit, knowing even as she thought it that she probably never would.

(13) tank top 9/16/08

_____ realized two days later when she next went to the gym. She guessed her shirt must have fallen out of her gym bag when she had stopped to talk to _____ and the bag's buckle had just snapped... so far, the week had not been going well. Luckily, she found her shirt on the way back from her failed attempt at the gym, and after a few washes, it seemed no worse for the wear.



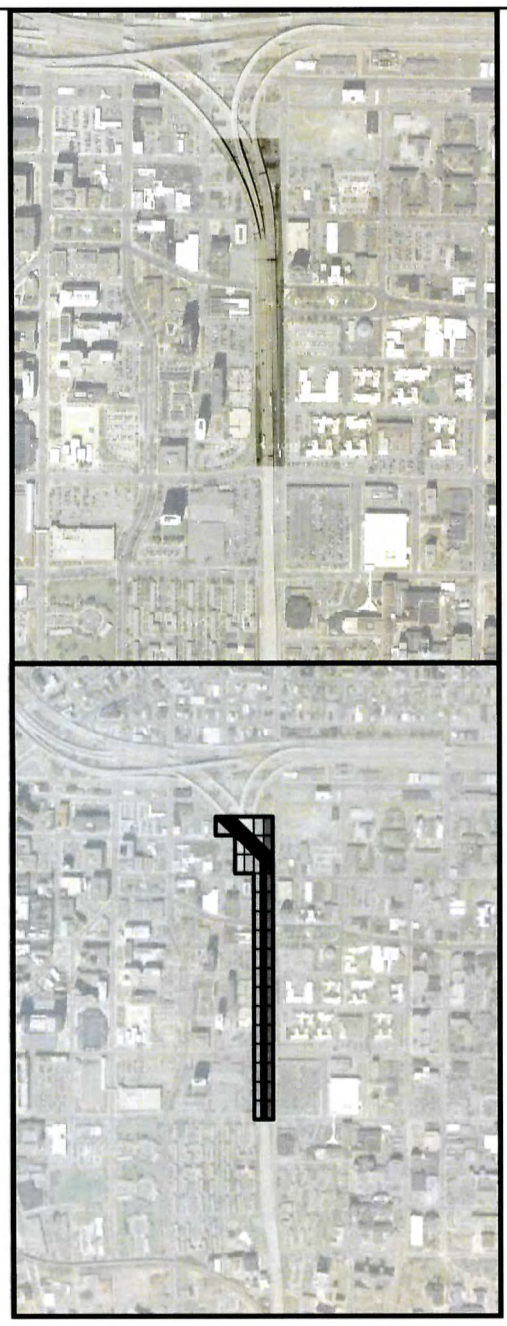
RESEARCH

QUILTING SYRACUSE

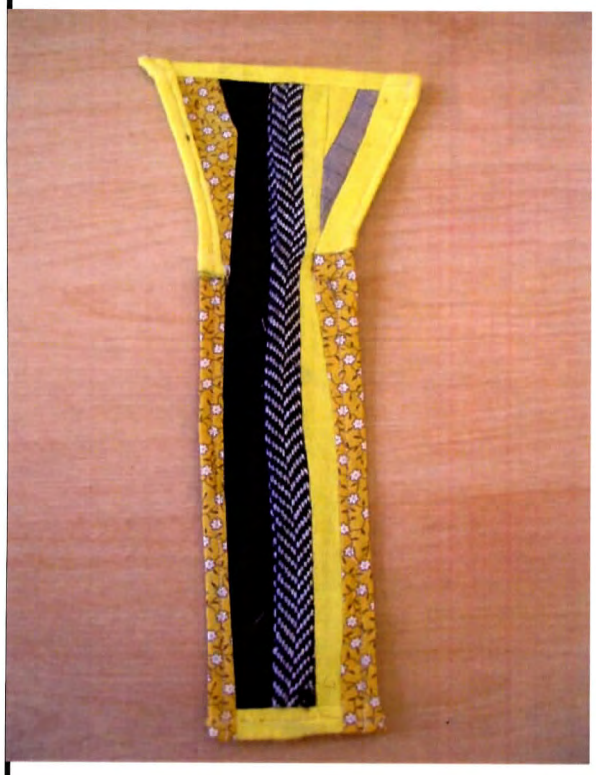
In this exercise, I made my own maps of Syracuse, exploring my own personally biased understanding of the city. Above and on the following pages, a series of experiential maps show some of the readings I have after living in Syracuse for four years. The first shows a breakdown of identity-related boundaries, with Thornden Park acting as a collector for any kind of group and therefore having little or no identity of its own. The second looks at Syracuse in a geographical and architecturally-biased way by studying the topography in Syracuse, which parallels some of the societal relationships such as the break between campus and city. The third map shows the network of significant open spaces in the city, which are underutilized but crucial to the understanding of this and any city.

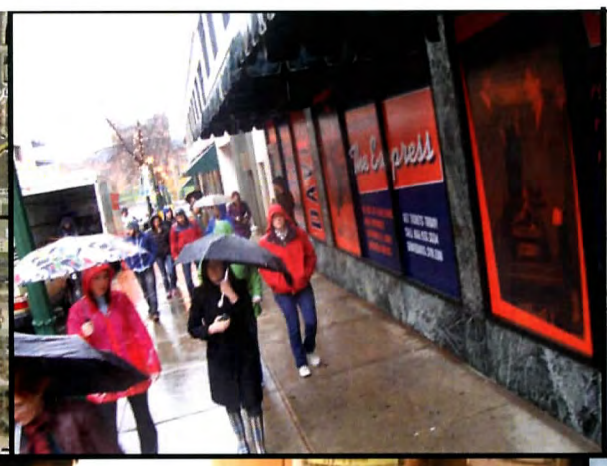
Following the maps, a set of images explores three of these critical open spaces in Syracuse's identity: Thornden park, which is the closest green space to any of the places I have lived off-campus and the site of many picnic and sledding expeditions; Interstate 81, which to me is a huge gash in the pedestrian fabric of Syracuse and an uncomfortable spatial experience; and the Everson plaza, a weird chunk of space favored by skateboarders and sandwiched between a famous art museum, a steam station, and a convention center. I take these spaces and present my quilt-inspired designs on them by representing the existing condition in the language of quilt patterns. The final step was producing actual quilts that were organically inspired by these designs.

RESEARCH



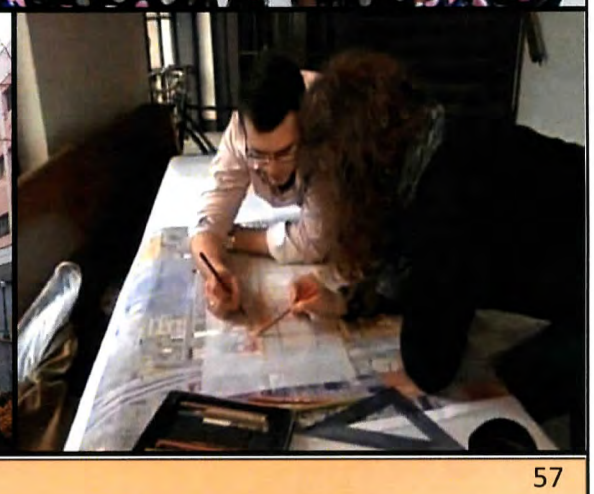
RESEARCH







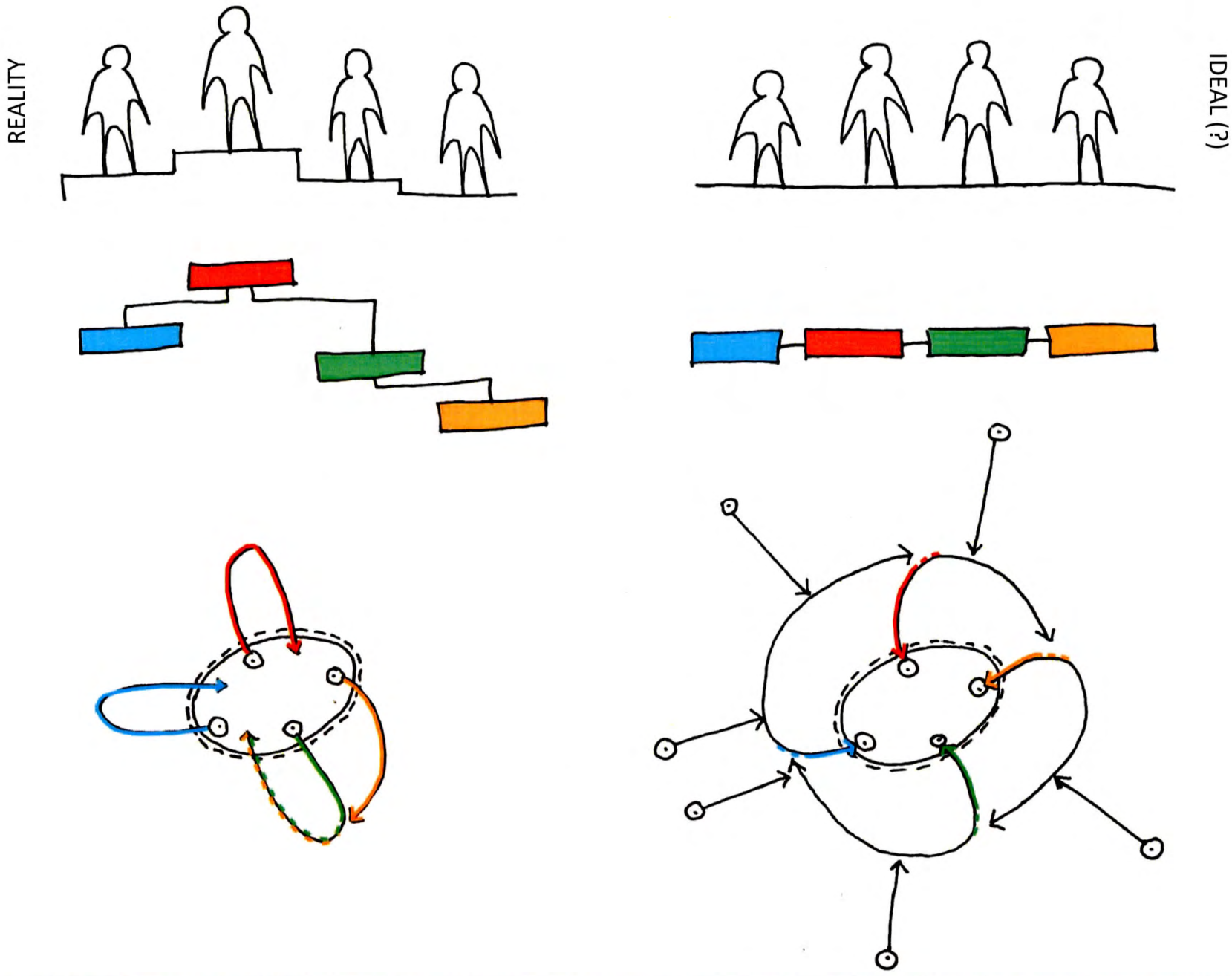


RESEARCH

CHARRETTE

Continuing my research into various ways of understanding Syracuse but also diverging into a study of how interdisciplinary collaboration works, I participated in a weekend charrette. The topic of the charrette was to revitalize Jefferson Row, a stretch of Jefferson Street beginning at the MOST building downtown and ending at Columbus Circle. Working within a team, I collaborated with industrial, communication, and fashion design students. Together we came up with a proposal that concentrated on the organic growth of a community. We thought about what could be done immediately as well as what could be done in five or ten year's time. Our newly designed spaces included a grocery store with available space for cooking demonstrations and local farmer's booths, a craft store with spaces for lessons, a park that was a playground with interactive video art, and a coffee store that sold books and functioned as an interior flea market. All of the spaces we added strove to be multifunctional destinations that allowed for various scales of commerce- such as with the smaller booths inside of a larger space with the grocery store and the coffee shop- as well as interactive places that people wanted to go. Our group was committed to the idea that people were what made urban space really work, so we wanted the commercial spaces not just to sell things, but to provide an opportunity for the community to help build itself from the ground up.



RESEARCH

Positive outcomes from my working on the charrette:

- learned what working in interdisciplinary groups is like
- diversity of opinions and viewpoints (and biases)
- each individual was comfortable working with a particular scale
- utilized voting as a way to narrow down ideas, worked well
- able to keep things in a "liquid" state- not nailed down or too specific
- variety of voices still came out even in the final presentation

Negative outcomes from my working on the charrette:

- didn't get outside of my comfort zone- others got into mine
- got personally attached to certain ideas instead of pushing for more
- sometimes opinions were disregarded
- didn't discuss as a group how to go from "liquid" to "crystallized" state- determined by individuals
- couldn't seem to get past some of the more obvious solutions
- hierarchical group organization

Above, some diagrams showing the dynamic of what actually happened, and what I think would be a more beneficial process. In the actual charrette, a hierarchy developed as I was elected unwilling de-facto leader since the project was "architectural." Two of the members bonded due to their similarly rambunctious natures, and the younger of the two was essentially delegated to work under the older member's supervision. The feedback loop was only partially functioning- each member worked only on their own project, and by themselves. In what I think would be ideal conditions, every collaborator would have equal weight and a lack of ownership over ideas would allow everyone, including outsiders, to provide feedback on and alterations to any project.

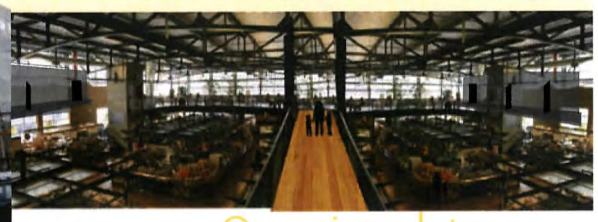
COMMUNITY

Education as an element of mutual benefit

Sibley Bulding

Grocery Store

Offer cooking classes



Open air market
Large seating areas

As a group, we collectively decided that the most important aspect of urban space is a diversity of human capital. Since we observed an already existing historical and physical identity on Jefferson Row, we wanted to avoid abstractly applying a theme and instead heighten and increase the value of the community that already exist around the site. It is this increase in the value of the human experience that interests us the most- the notion of democratic space, a space in which everyone has an equal voice, an equal value, and an equal right to form their own personal narrative.

Dey Building

Craft Store
Smaller additional retail space

Promoting local art

Variety of classes offered

Columbus Circle Park

Allowing people to interact in more than one space

Before

After

Future developments who include a non-commercial spatial, financial, or commitment which benefits the local immediate community.

Consequently, the spaces we are designing are focused on the ability to offer something for everyone. They are multifunctional, interactive, and adaptable spaces that concentrate on a mutually beneficial relationship to both the individual and the community. Education emerges as a key example of this type of give and give-back relationship between individual and community. In this way, grown happens through personal involvement and investment. We considered heavily the scale of the designs, not just the physical size of the proposal, but also the financial footprint- what can be achieved to help this community grow right now, and what can we do to take it furthur in several years, and how do we see it in a decade or more.

Jefferson Building

FINDINGS

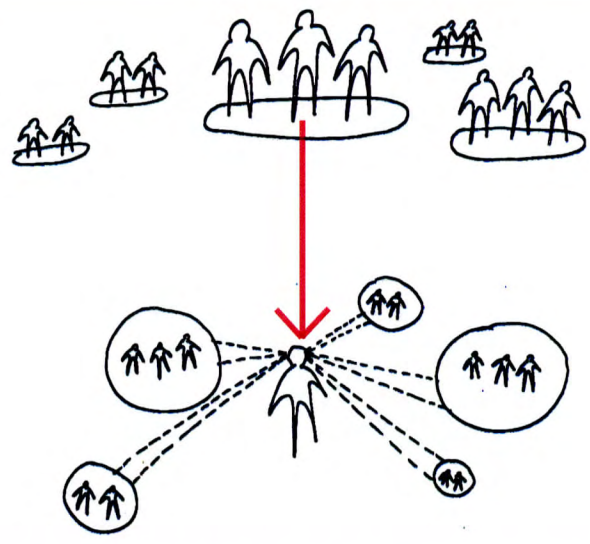
After examining the relationship between education and outsider-ness, formulating a social science theory based on the practice of quilting, comparing that theory to other emergent theories, and testing some of these key concepts by hands-on experimentation, I have come to several (biased) conclusions:

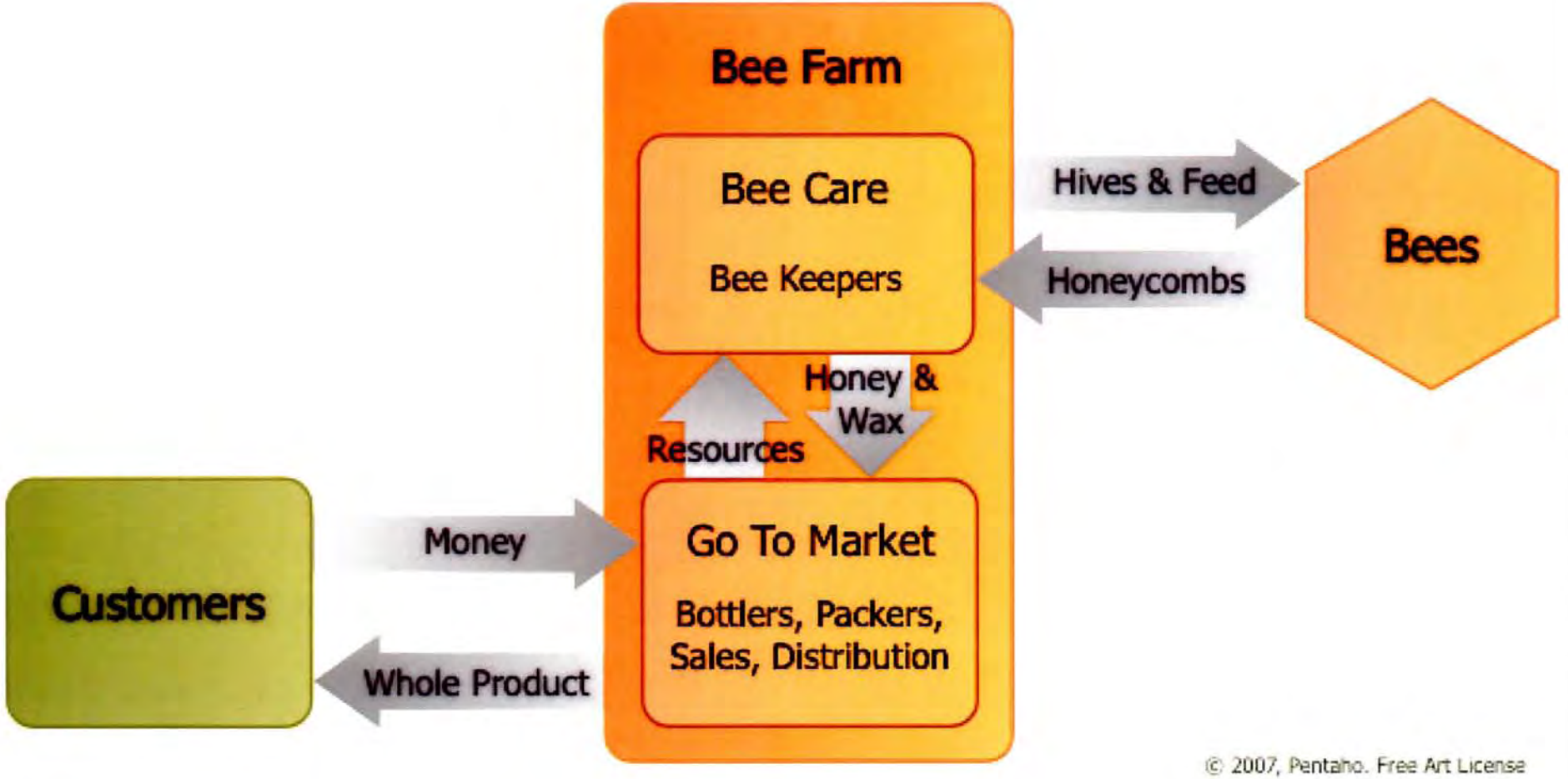
- Biases are inevitable, but acknowledging them is a crucial step in working effectively.
- Emergent systems help us to account for what we don't know we don't know.
- Interdisciplinary collaboration provides a wide range of influence, which provides a wider base of individuals able to relate.
- Architecture cannot continue doing what it is doing and yet expect a better (architectural or otherwise) environment.
- Architecture, which has long been an insular and insider-oriented discipline, should open itself up to the feedback of outsiders, who are the public we aim to serve
- Through exposure, outsiders become insiders. Therefore, by opening architecture to the public, we transform them into architectural insiders, leading to more design-oriented environment.

thesis statement

By taking cues from quilt theory and from emergent social science theories, I will formulate a methodology for working that opens a feedback loop, exposing the discipline to outsiders and outsiders to architecture.

This methodology is called outerdisciplinarity, and is a model for collaboration that enables participants to leave the space and logic of their own disciplines by defamiliarizing and decontextualizing the assumed conditions of the everyday.

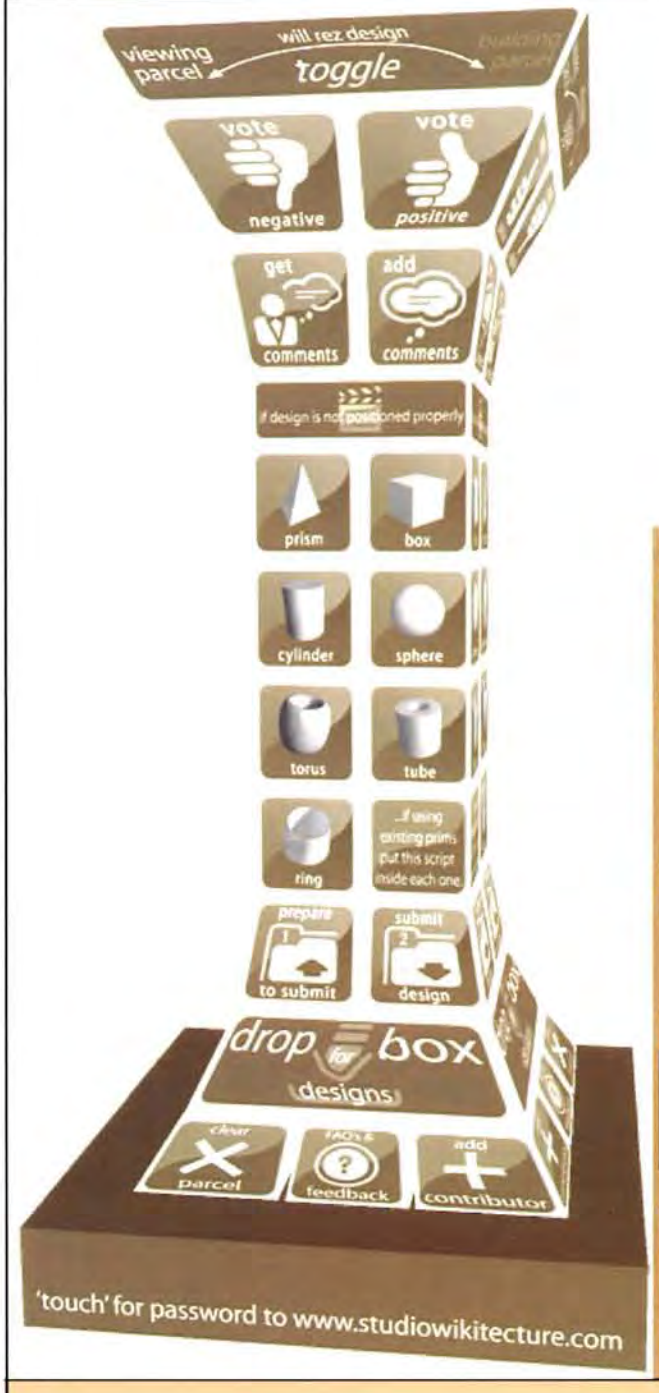


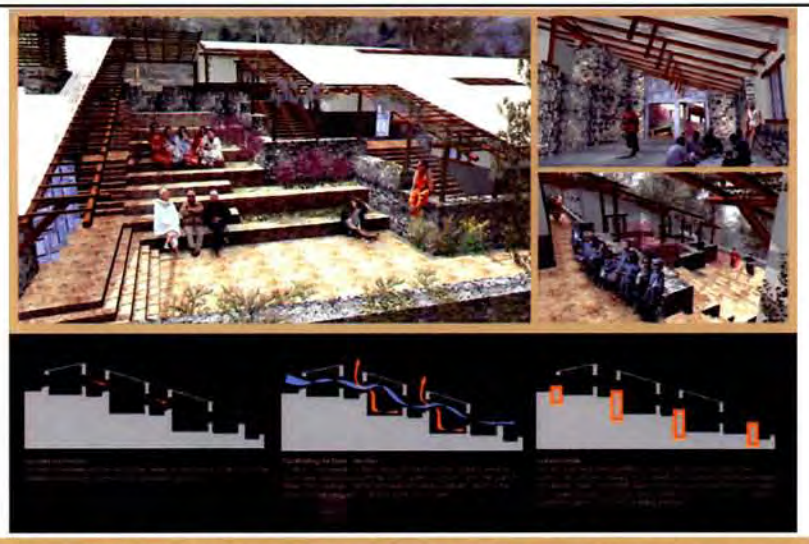


precedents

open source software

Open source refers to software that users are given the freedom to manipulate at will. Similar to the principles of Wikipedia, the goal of open sourcing is to create a mutually beneficial relationship- the community gets a better product at the same price with software that is customizable to their own needs, which results in higher sales and stronger brand loyalty for the company. This is called the Bee Keeper analogy (see above) due to its similarity to how the beekeeper's creation of a comfortable environment for the bees yields happier bees that return to the hive and higher profits for the beekeeper. According to the Open Source Initiative, it is integral to the principles of open source that the host company does not discriminate or restrict access based on individual, group, or field of endeavor. They can, however, ensure that future alterations are saved under a different name to protect the integrity of the original source code. The company must also make sure the software is modifiable, and doesn't preference or restrict any other technology or interface. If the software meets these criterion, it may call itself open source. What is perhaps most interesting about open sourcing is that it has given birth to a community of sorts which, is not only comprised of computer experts but of people from various backgrounds and skill levels who are all interested in the appropriation and modification of the world around us to better suit our individual needs.





OPEN ARCHITECTURE COLLABORATIVE PROCESS: NOW AND THROUGHOUT THE FACILITY LIFE CYCLE

The first group of ideas submitted were simple 2D diagrams showing proposed arrangement of functions

Some ideas were studies of the architectural vernacular of the region

Others proposed concepts such as expandability and resilience

Contributions also contained extensive written documentation of material options

One community member submitted several hand-sketched layouts

Another member extracted the most popular layout into a 3D diagram

The concept evolved from 2D sketch into a more comprehensive 3D model, based on collaborative research on material options, sustainability and seismic considerations

Based on new information provided by Nyaya Health and the OAN team visit to the site, the community quickly absorbed this information and shifted gears to accomodate this new information. One contributor modeled the new site, another submitted new sketch diagrams on the corresponding web-site forum.

Though the site and program changed, most of our cultural, regional and material research still applied.

The design we are submitting is only one point along a greater timeline. We look forward to inviting further input from Nyaya Health and the community of end users to inform the next phases of evolution toward an ideal solution.

To facilitate this collaboration, we developed a grassroots '3D-Wiki' technology that is built on the virtual reality platform: Second Life. With this technology, we were able to focus a very diverse range of ideas into a naturally evolving process ranging from comprehensive text-based research to 2D plan diagrams and on into immersive 3D virtual models designed and built on a replica of the project site.

The virtual replica we have developed will not disappear after this competition is complete, but will live on as an evolving virtual model of the real life site in Nepal, echoing each new development and opportunity as the project comes to life. Though the real life site may be challenging to access, this mirror rendition of the project site will enable many people from around the world to experience the local site and conditions as it evolves, further expanding the outreach, awareness and support for this project to a global audience throughout its entire life cycle. In addition to the virtual counterpart, we have also introduced a web-based 2D portal that communicates with the virtual model. In this way, those who cannot or do not care to access Second Life, will still be able to join the team and lend their specific knowledge and support.

We believe that our design should be reviewed and further refined with direct input from Nyaya Health and the end-users of the facility. Our entire design process has been collaborative and fluid, and we have no illusions that we have reached the optimal trade-off among the many practical and aesthetic considerations. We can only achieve excellence by incorporating more local knowledge and experience into the design.

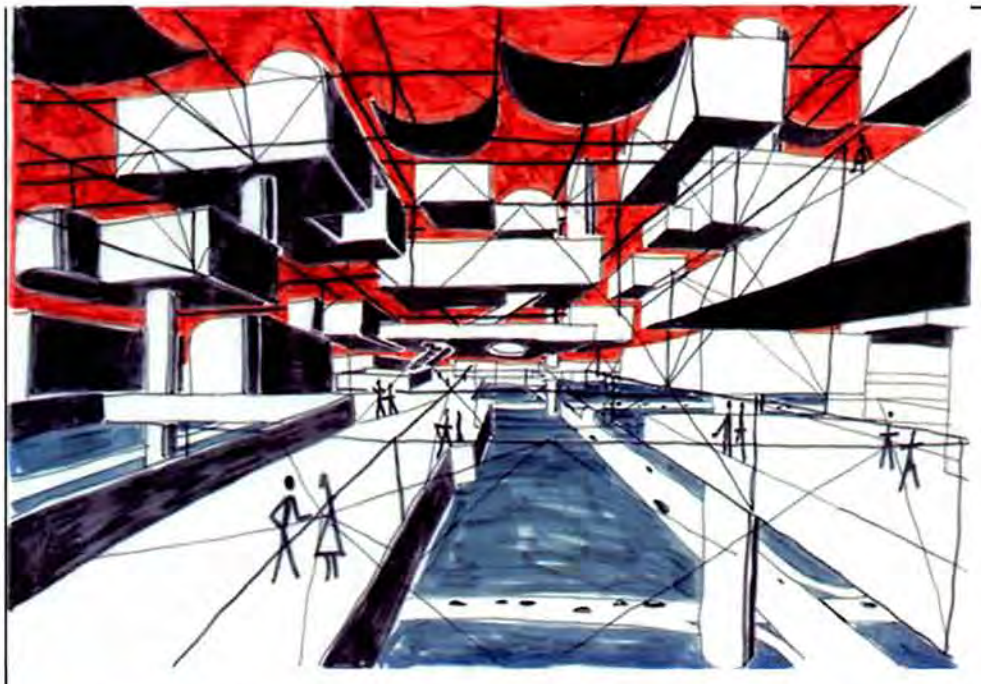
precedents

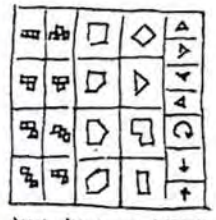
studio wikitecture

Studio Wikitecture operates on a lot of the same principles that I am looking at in my thesis. Their website claims the organization's goal is as follows:

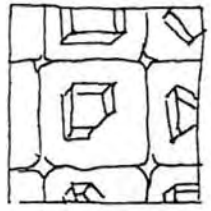
> *Improving Architecture and City Planning by Harnessing the Ideas behind Mass Collaboration, Social Networking, Wikis, Folksonomies, Open Source, Prosumers, Networked Intelligence, Crowd Sourcing, Crowd Wisdom, Smart Mobs, Peer Production, Lightweight Collaboration, Emergent Intelligence, Social Production, Self-Organized Communities, Collective Genius, Loose Networks of Peers, Collaborative Infrastructures, Open platforms, Wiki Workplace, Open Innovation, Horizontal Networks, Collective Intelligence, Global Innovation Networks, Swarm Intelligence, Decentralized Collaboration, Participatory Culture, Web 2.0...and the like.*

However, the firm diverges from the aims of my project in that the architecture and the collaboration take place almost exclusively in Second Life, a virtual world accessible via the internet. Online participants can access the wiki-tree interface, shown above left. Through this application, users can see the evolution of an idea through a physical representation. They can also add their own design, vote on existing ones, and add or view comments to any of the existing submittals. Preference is given to design submittals that work off of designs that were already highly ranked, enabling crowd sourcing. Through this tool, Studio Wikipedia came up with a collaborative design for Architecture for Humanity's competition hosted by the Open Architecture Network. Their design for a medical clinic in Nepal won the Founder's Award.

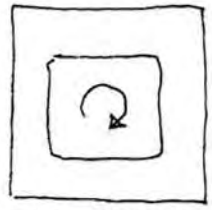




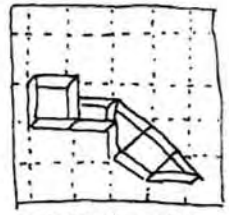
YOU HAVE TO WRITE USING A SPECIAL KEYBOARD



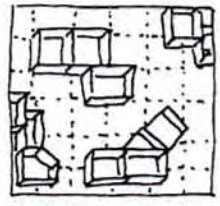
THE KEYS ARE REPRESENTING ROOM-SHAPES



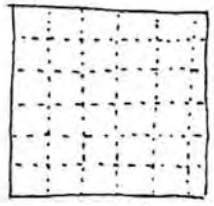
WHOSE POSITIONS CAN BE ROTATED WITH A SPECIAL KEY



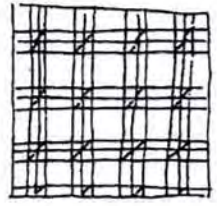
A "WORD" TYPED WITH THESE KEYS SHOWS A STRING OF ROOMS



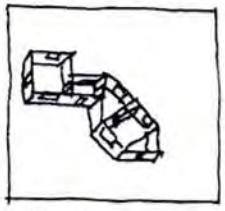
A "TEXT" IS A SUITE OF "WORDS": YOUR FLOOR PLAN AND THAT OF YOUR NEIGHBOURS



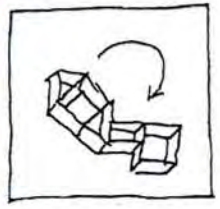
THE "WORDS" ARE TYPED ONTO A "GRID"



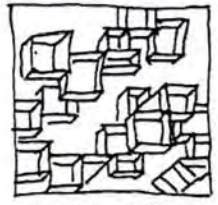
THIS "GRID" REPRESENTS THE "INFRASTRUCTURE" INTO WHICH THE FLATS ARE FITTED



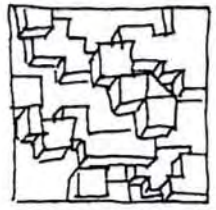
OBVIOUSLY YOUR FLAT HAS TO BE DETAILED: DOORS WINDOWS EQUIPMENTS (BATH. KITCHEN, WC ETC)



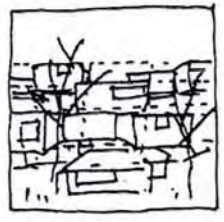
AND YOU HAVE TO DECIDE FINAL ORIENTATION ROTATING THE PLAN



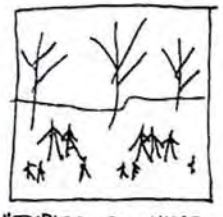
THE "TEXT" CAN BE OF SEVERAL "PAGES": EACH "PAGE" IS THE PLAN OF A DIFFERENT FLOOR



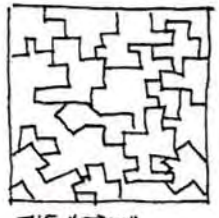
A "TEXT" TYPED BY MANY PEOPLE PRODUCES THE PLAN OF A NEIGHBOURHOOD



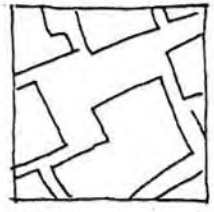
A CITY IS A COLLECTIVE "TEXT"



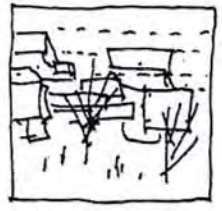
"TYPED" BY THOSE WHO WANT TO LIVE THERE



THE "TEXT" TYPED ON THE FLATWRITER



IS NOT THE COMPLETE CITY PLAN BUT RATHER A "WISHING LIST":



THE FIRST STEP TOWARDS HAVING YOUR TOWN BE AS YOU LIKE

precedents

YONa FRIEDMAN

Yona Friedman's Spatial City explores the idea of a fixed infrastructure superimposed onto an existing context that allows for user-generated content through the use of a computer program, called the Flatwriter. This program allows everyday people to design their own housing unit to be inserted into the grid elevated above our existing world. In this way, the average person has direct input as to the formal and spatial relationships of their own built environment.


10m

precedents

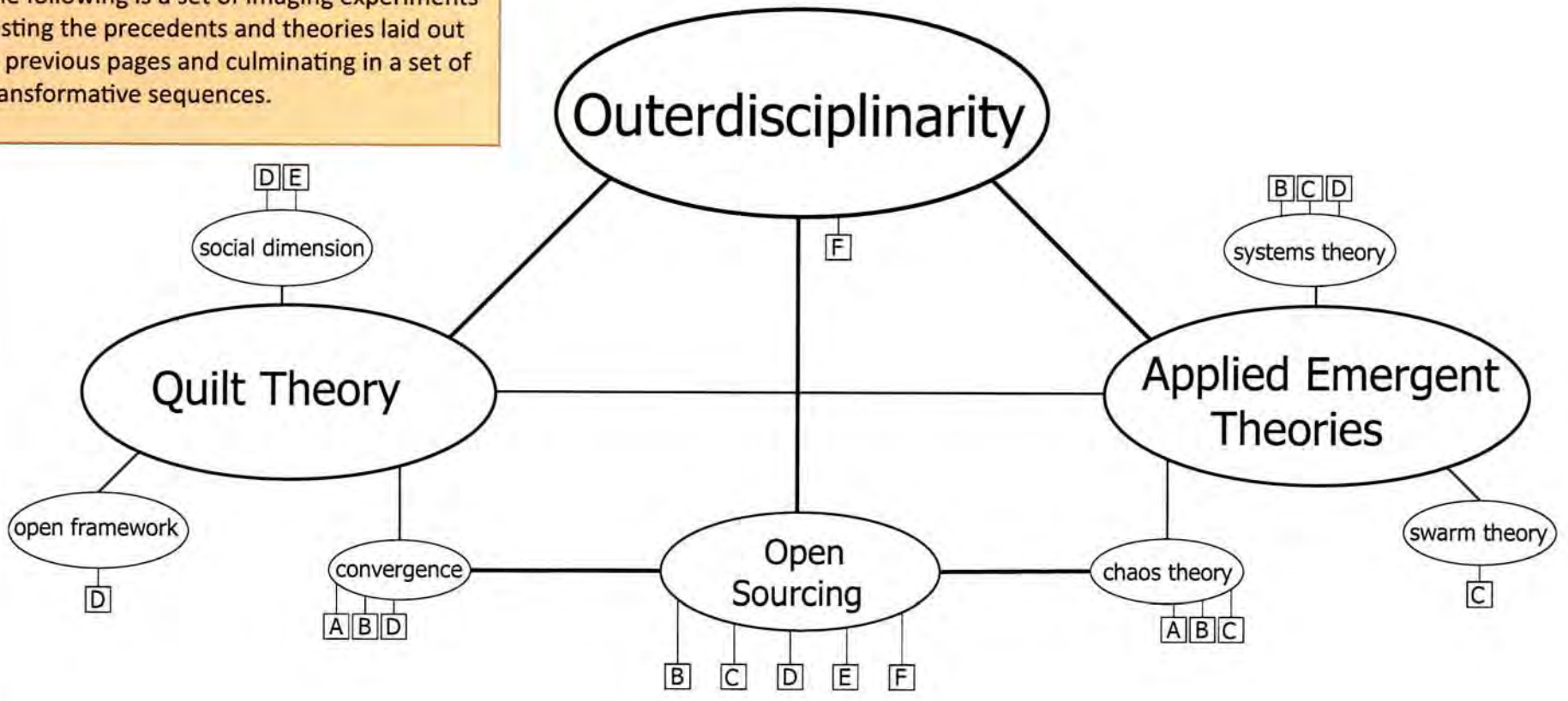
Krzysztof wodiczko

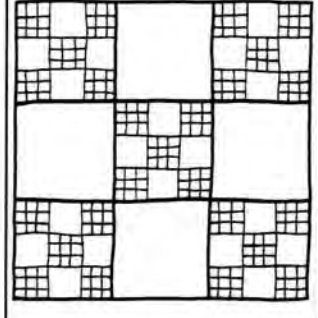
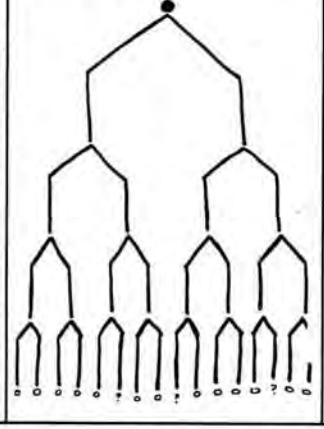
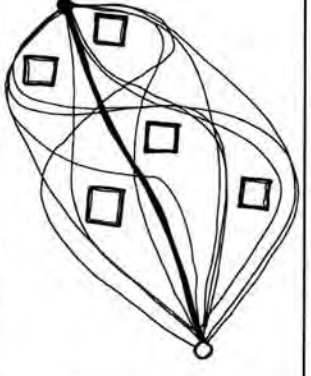
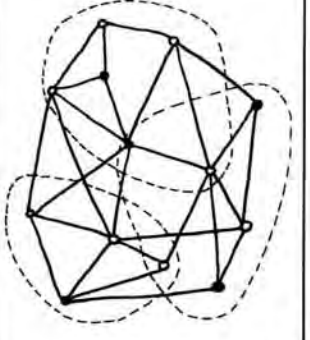
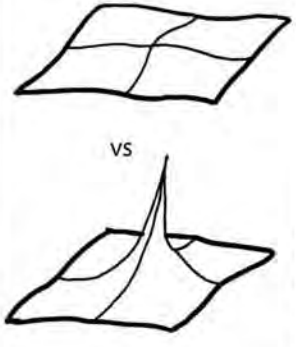
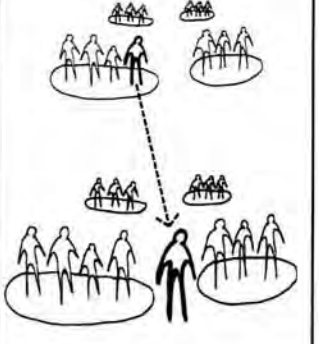
Krzysztof Wodiczko's DisArmor project, above left, provides a voice to those without through the use of spatial and technological filters. In this project, his project allows Japanese schoolchildren who are too emotionally scarred to talk a technological means to express themselves. The project is inspired by a Japanese proverb that says you can tell more from a man's back than his front.

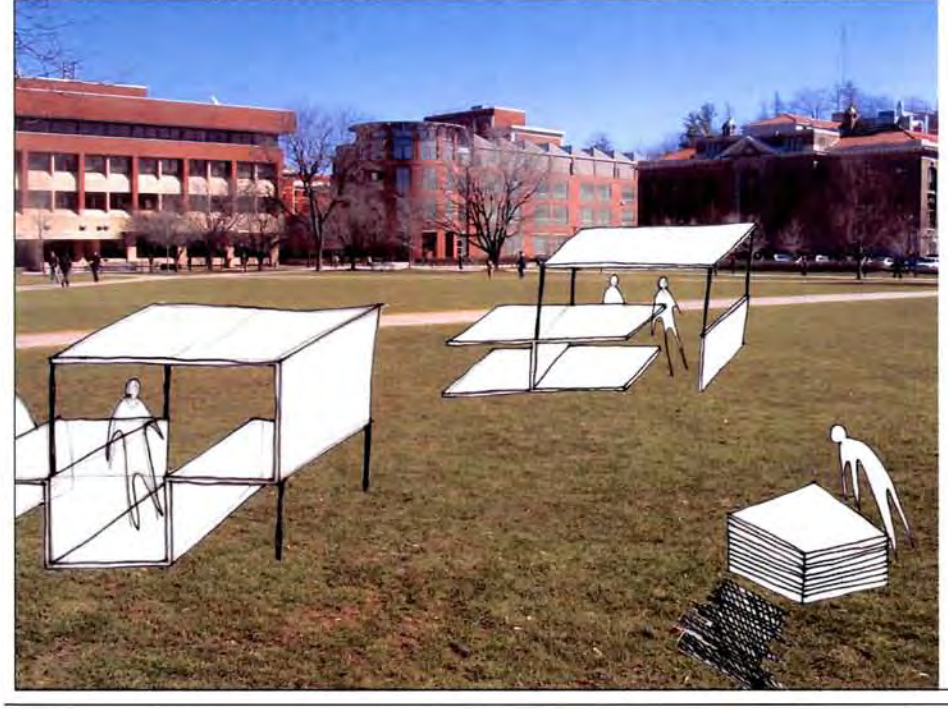
Atelier bow-wow

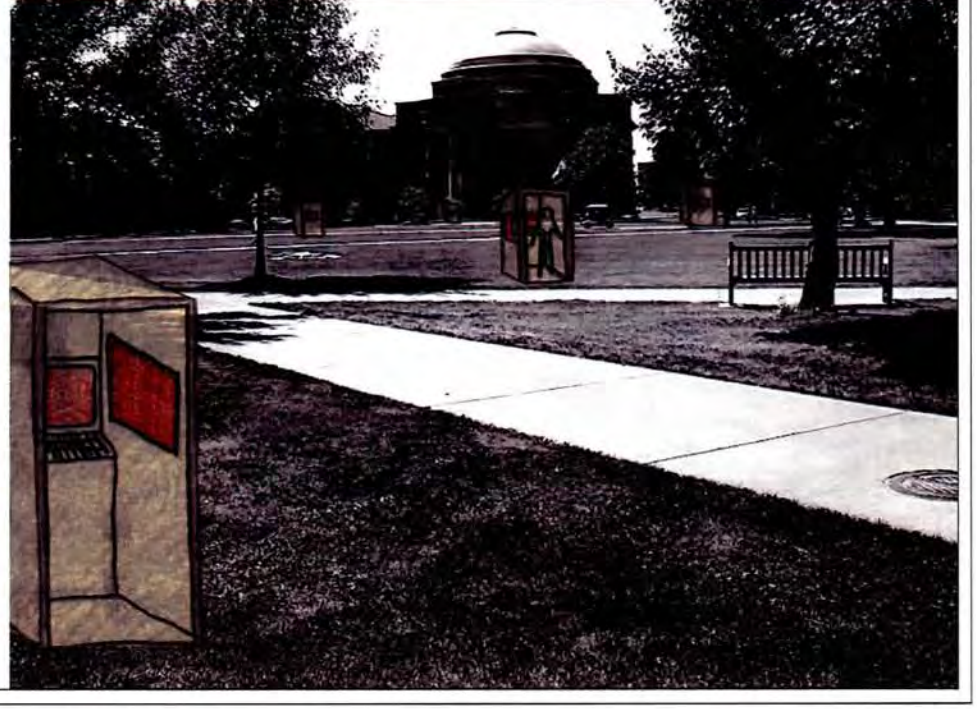
Atelier Bow-Wow's small scale projects are interested in an architecture that produces a social event. In this project, White Limousine Yatai, the firm takes an everyday urban typology, such as the yatai or small street food vendor, and turns it into a celebrated event - a large version which takes several people to move around, blocking traffic as it goes. When the White Limo Yatai reaches its destination, a communal meal takes place.

The following is a set of imaging experiments testing the precedents and theories laid out in previous pages and culminating in a set of transformative sequences.



A	B	C	D	E	F
self-similarity	parts to whole	trial and error	network	wave vs particle	insider outsider
					





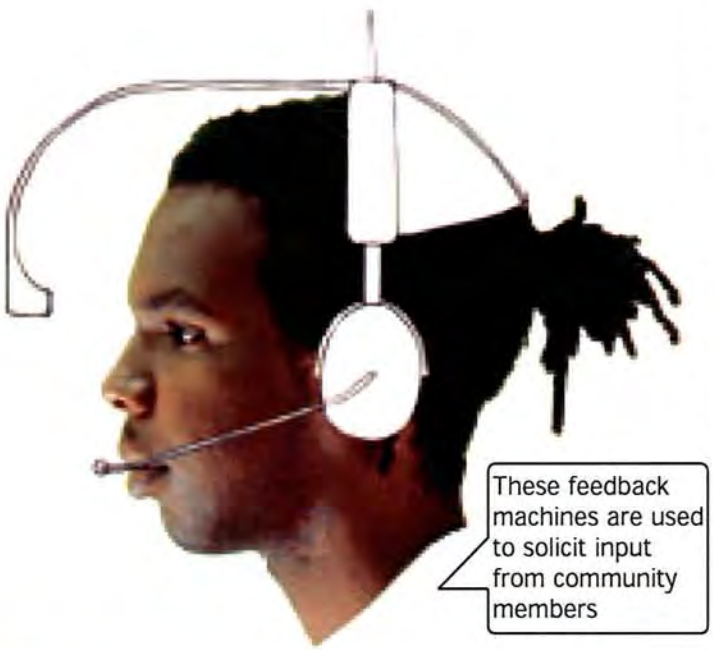

cabinet of endless resources
projected feedback from outsiders
storage of adaptable furniture units
collaborators
collaborators
plug-in system for furniture units

you are now entering outer · space!

5 participants in your area

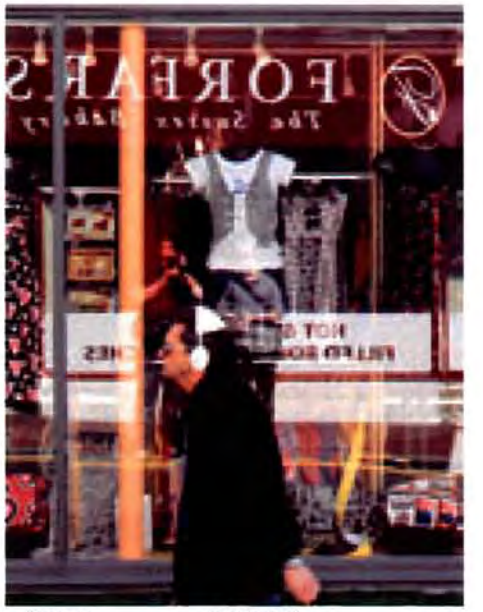
outer · disciplinarity

the mobile think tank application for iphone



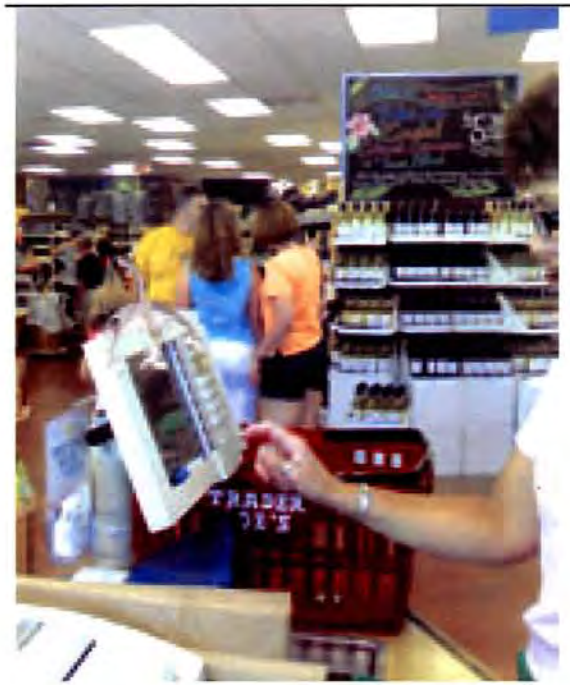
These feedback machines are used to solicit input from community members

FEEDBACK HEADSET



Components:
- camera
- microphone
- gps tracker
- headphones
- data processor and storage

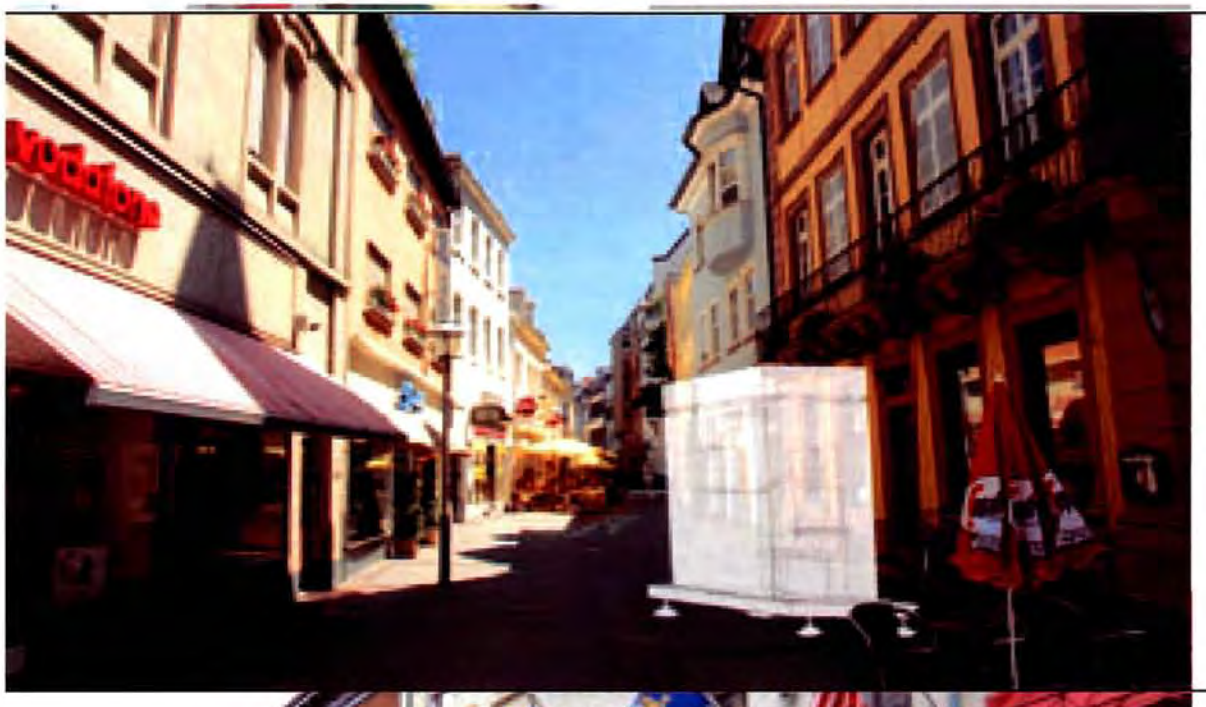
Targeted audience:
Community members who are active and mobile within the community and comfortable sharing specific personal experiences and memories.



FEEDBACK OPERATIVE

Components:
- motion sensor
- camera
- high range microphone
- data processor and storage

Targeted audience:
Community members who are unwilling or unmotivated to provide feedback knowingly.



FEEDBACK BOOTH

Components:
- camera
- microphone
- lcd screen
- keypad
- headphones
- data processor and storage

Targeted audience:
Members of the community who may feel unsafe or uncomfortable speaking at town hall meetings.

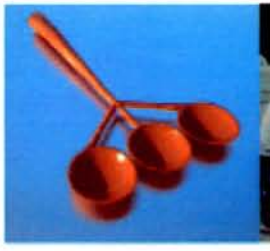
FEEDBACK KIOSK

Components:
- camera (hidden)
- lcd screen
- keypad
- data processor and storage

Targeted audience:
Members of the community who are comfortable sharing their opinions but would rather do so in a less formal setting

This taxonomy is an investigation of the different design characteristics that go into the making of a utensil: type of mechanism, number of mechanism, handle length, width, and material. I generated a field of possibilities based on the parameters I set up for each of these design criteria, and then used a weighted random number generator to solve for things like bigness, smallness, usefulness, and uselessness. Bigness wanted the greatest possible surface area, whereas smallness wanted the smallest possible surface area. Useful looked for normality- it wanted to find a utensil that looked most like the one we use everyday, while useless wanted a utensil that was unrecognizable. The utensils generated from these 'tests' are shown rotated according to the diagrams above. The utensils that look like something else, such as the comb, inspired a field of offshoot possibilities for that future as well.

These findings were then applied to the campus. By observing existing criteria on the quad, such as social and academic interaction as well as play, I pushed these criteria to their logical conclusion with the intent of using these existing qualities to promote an outerdisciplinary campus.

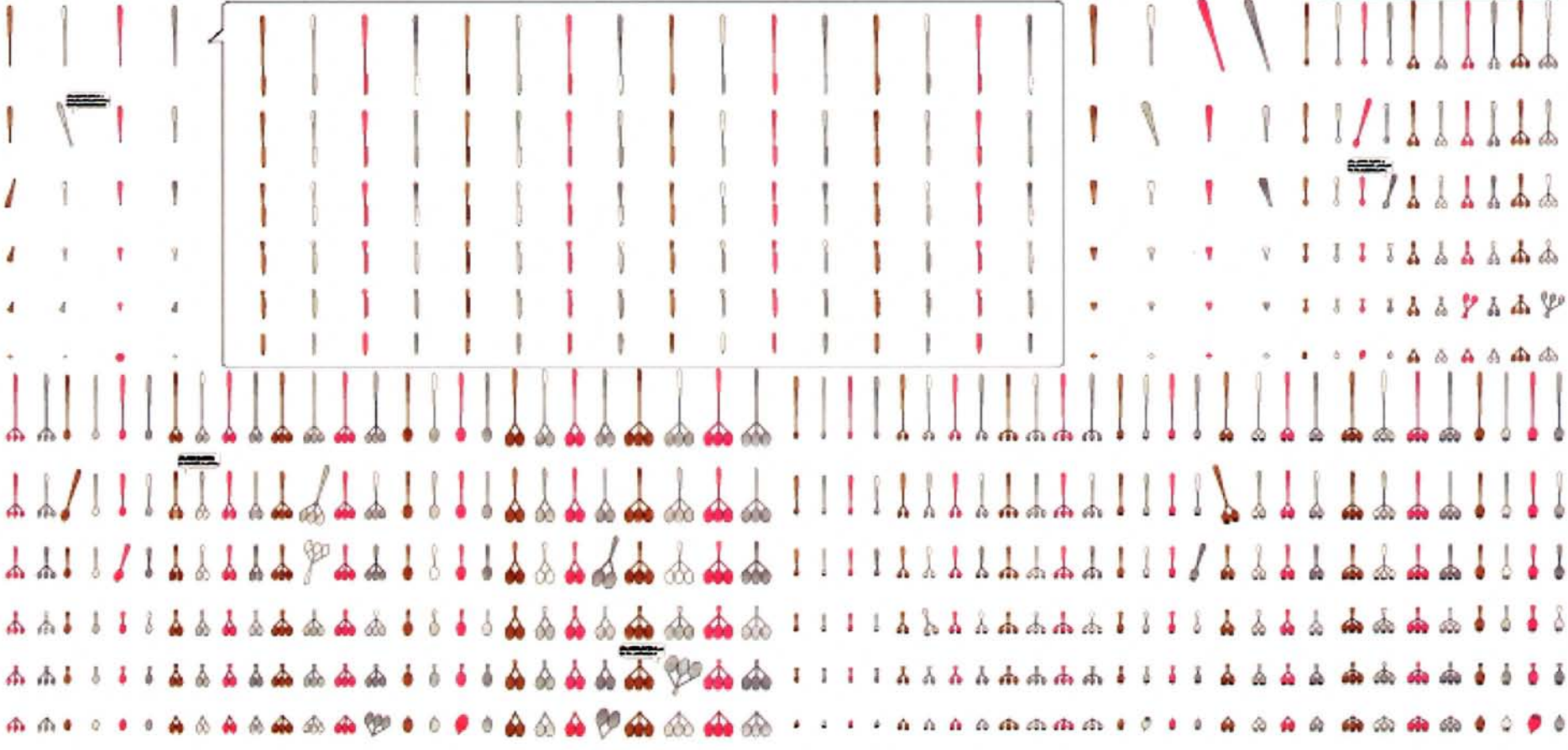


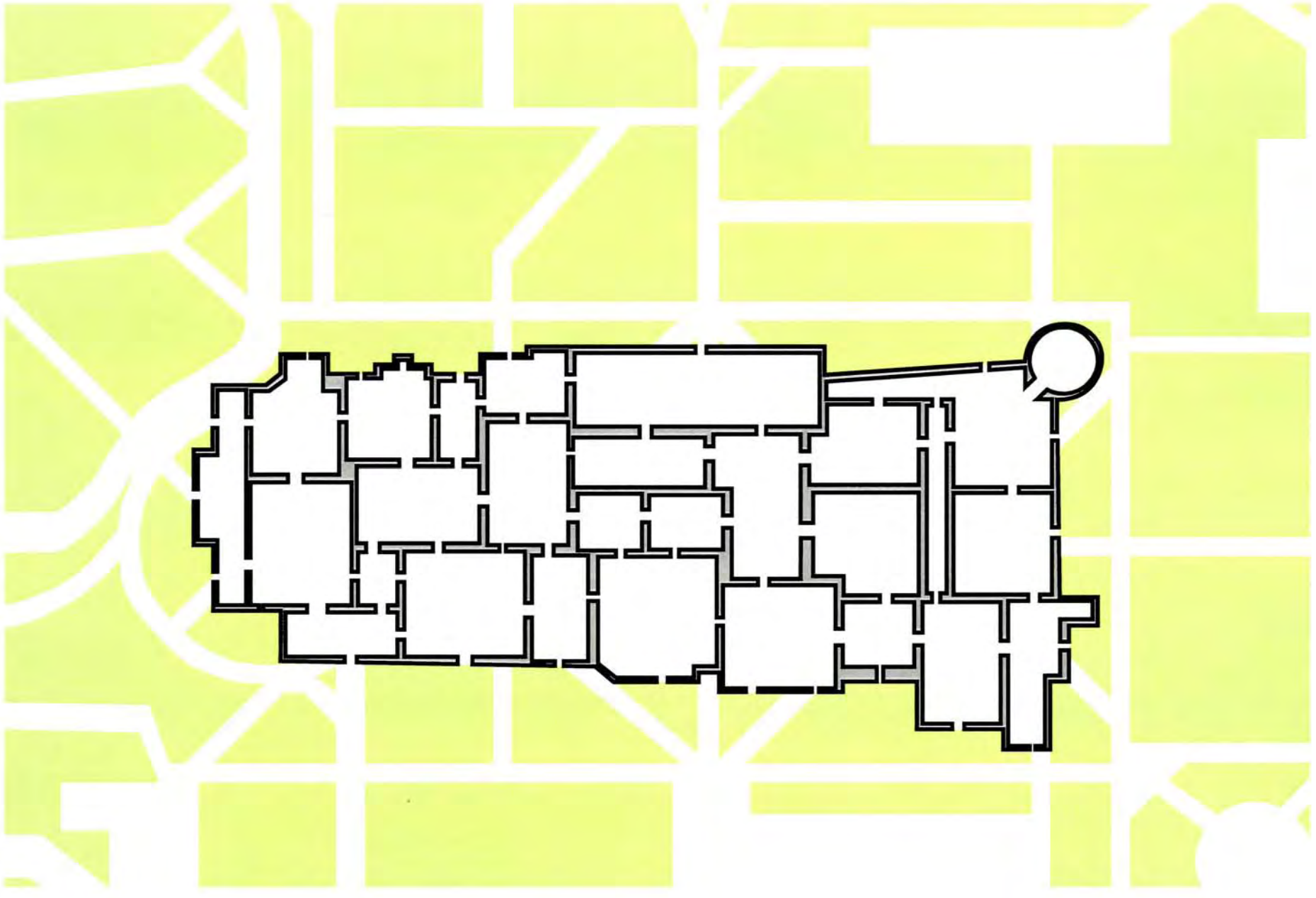

Testing for USEFULNESS

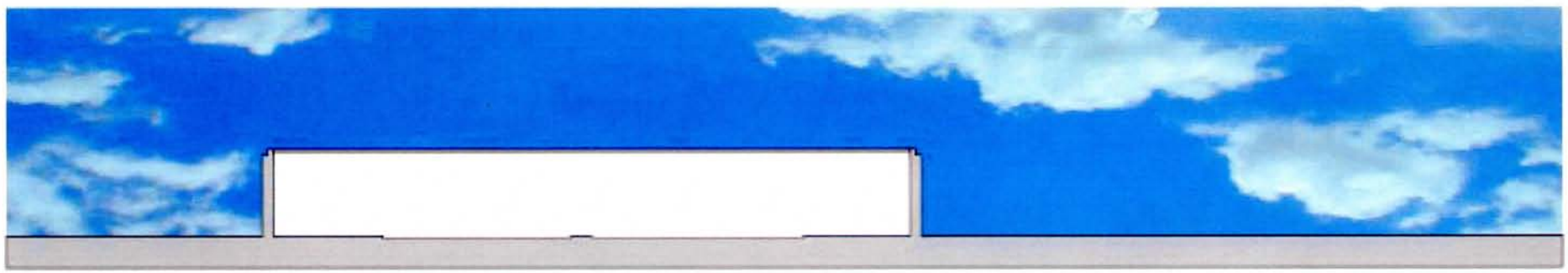

Testing for BIGNESS

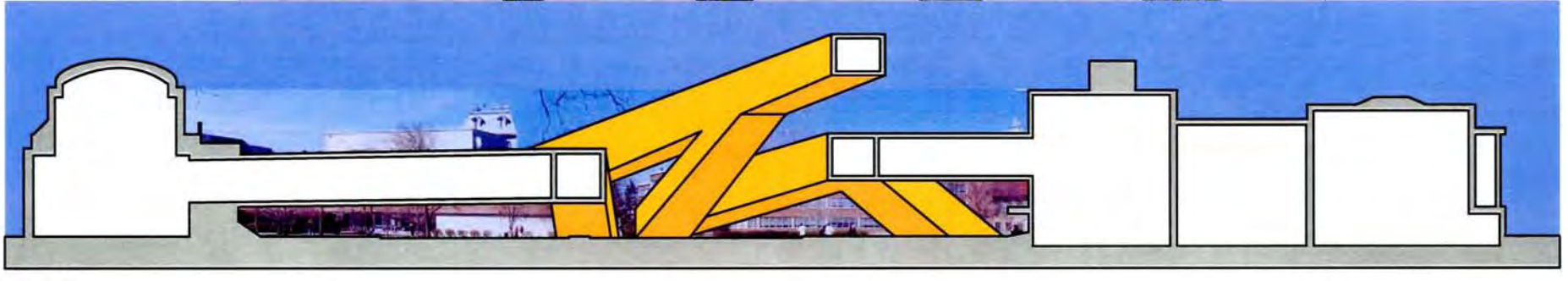

Testing for SMALLNESS


Testing for USELESSNESS










Augies
STARBUCKS COF